

# **SAR Test Report**

Report No.: AGC00197130701FH01

FCC ID : 2AAMZ-3G7

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: 7inch Tablet PC

**BRAND NAME**: ubilsate

MODEL NAME : 3G7

**CLIENT**: Datawind Ltd.

**DATE OF ISSUE** : Jul.29, 2013

FCC Oet65 Supplement C June 2001

**STANDARD(S)** : IEEE Std. 1528-2003

47CFR § 2.1093

**REPORT VERSION**: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd.

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Report No.:AGC00197130701FH01 Page 2 of 161

### **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	1	Jul.29, 2013	Valid	Original Report

٦	Test Report Certification				
Applicant Name	:	Datawind Ltd.			
Applicant Address	:	Dephna House, 214 Acton Lane, London, NW10 7NH			
Manufacturer Name	:	ShenZhen JiaChuangBo Technology Co., Ltd.			
Manufacturer Address	:	2nd F, LaoBing Building, XingYe Road, XiXiang Town, Bao'An District, ShenZhen, China			
Product Designation	:	7inch Tablet PC			
Brand Name	:	ubilsate			
Model Name	:	3G7			
Different Description		N/A			
EUT Voltage	:	DC3.7V by battery			
Applicable Standard	:	FCC Oet65 Supplement C June 2001 IEEE Std. 1528-2003 47CFR § 2.1093			
Test Date	:	Jul.26, 2013			
Test Results	:	MAX SAR MEASUREMENT(1g) Body: <b>0.714</b> W/Kg (2G) Body: <b>1.144</b> W/Kg (3G) (Maximum Scaling SAR = <b>1.545</b> W/Kg) simultaneous transmission: <b>1.407</b> W/Kg			
Performed Location		Attestation of Global Compliance(Shenzhen) Co., Ltd.			
i enomieu Location		2 F, Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen, China			
Report Template		AGCRT-US-3G2/SAR (2013-03-01)			

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#### **TABLE OF CONTENTS**

1. GENERAL INFORMATION	5
1.1. EUT DESCRIPTION	7
2. SAR MEASUREMENT SYSTEM	8
2.1. COMOSAR SYSTEM DESCRIPTION	
3. TISSUE SIMULATING LIQUID	13
3.1. THE COMPOSITION OF THE TISSUE SIMULATING LIQUID	14
4. SAR MEASUREMENT PROCEDURE	16
4.1. SAR SYSTEM VALIDATION	
5. SAR EXPOSURE LIMITS	19
6. TEST EQUIPMENT LIST	20
7. MEASUREMENT UNCERTAINTY	21
8. CONDUCTED POWER MEASUREMENT	22
9. TEST RESULTS	27
9.1. SAR TEST RESULTS SUMMARY	27
APPENDIX A. SAR SYSTEM VALIDATION DATA	40
APPENDIX B. SAR MEASUREMENT DATA	46
APPENDIX C. TEST SETUP PHOTOGRAPHS &EUT PHOTOGRAPHS	116
APPENDIX D. PROBE CALIBRATION DATA	125
ADDENDIY E DIDOLE CALIBRATION DATA	135

Report No.:AGC00197130701FH01 Page 5 of 161

## 1. General Information

## 1.1. EUT Description

General Information		
Product Designation	7inch Tablet PC	
Test Model	3G7	
Hardware Version	PD700_MB_V6.0	
Software Version	N/A	
Device Category	Portable	
RF Exposure Environment	Uncontrolled	
Antenna Type	Internal	
GSM and GPRS		
Support Band	□ GSM 850	
GPRS Type	Class B	
GPRS Class	Class 8,10 ,12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)	
TX Frequency Range	GSM 850 : 824.2~848.8MHz; PCS 1900: 1850.2~1909.8MHz;	
RX Frequency Range	GSM 850 : 869~894MHz PCS 1900: 1930~1990MHz	
Release Version	R99	
Type of modulation	GMSK for GSM/GPRS	
Antenna Gain	1.0dBi	
Max. Output Power (Avg. Burst Power)	GSM850: 32.53dBm(31.44dBm- Avg. Burst Power) PCS1900: 29.73dBm(28.67dBm- Avg. Burst Power)	
Max. Output Power (Radiated)	GSM850: 30.63dBm- ERP PCS1900: 28.28dBm- EIRP	
WCDMA		
Support Band	U.S. Bands:  UMTS FDD Band II  UMTS FDD Band V Non-U.S. Bands:  UMTS FDD Band II  UMTS FDD Band VIII	
HS Type	HSPA(HSUPA/HSDPA)	

TX Frequency Range	WCDMA FDD Band II: 1852.4 -1907.6MHz WCDMA FDD Band V: 826.4-846.6MHz			
RX Frequency Range	WCDMA FDD Band II: 1930-1990MHz WCDMA FDD Band V: 869-894MHz			
Release Version	Rel-6			
Type of modulation	QPSK			
Antenna Gain	0.8dBi			
Max. Output Power (Avg. Burst Power)	Band II: 23.63dBm (22.71dBm- Avg. Burst Power) Band V: 23.62dBm (23.34dBm- Avg. Burst Power)			
Max. Output Power (Radiated)	Band II: 22.41dBm- ERP Band V: 22.15dBm- EIRP			
Bluetooth				
Bluetooth Version	□V2.0         □V2.1         □V2.1+EDR         □V3.0+EDR         □V4.0			
Operation Frequency	2402~2480MHz			
Type of modulation	⊠GFSK ⊠∏/4-DQPSK ⊠8-DPSK			
Avg. Burst Power	5.03dBm			
Antenna Gain	1.2dBi			
WIFI				
WIFI Specification	☐802.11a ☐802.11b ☐802.11g ☐802.11n(20) ☐802.11n(40)			
Operation Frequency	2412~2462MHz			
Avg. Burst Power	11b: 17.04dBm,11g: 16.37dBm,11n(20): 16.27dBm,11n(40): 13.52dBm			
Antenna Gain	1.2dBi			
Accessories				
Battery	Brand name: N/A Model No. : 348595 Voltage and Capacitance: 3.7 V & 2400mAh			
Adapter	Brand name: N/A Model No. : JHD-AP012U-XXXYYYFD Input: AC 100-240V, 50/60Hz, 0.35A Output: DC 5V, 2000mA			
Earphone	Brand name: ubilsate Model No. : 3G7			

#### Note:

- 1. The EUT is a model of GSM Portable Mobile Station (MS). It supports GSM/GPRS, BT, WIFI, and support hot spot mode.
- 2. The sample used for testing is end product.

Report No.:AGC00197130701FH01 Page 7 of 161

#### 1.2. Test Procedure

1	S	Setup the EUT and simulators as shown on above.
2	2 Tu	urn on the power of all equipment.
3	B E	EUT Communicate with 8960, and test them respectively at U.S. bands

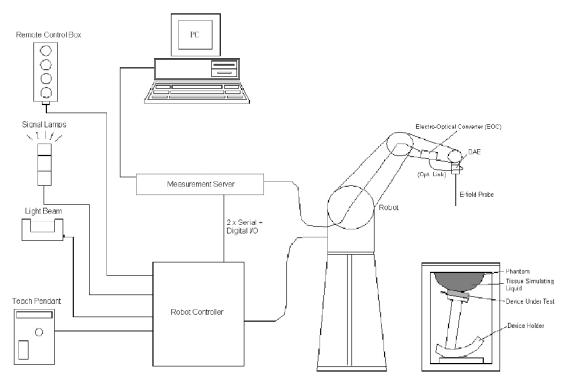
#### 1.3. Test Environment

Ambient conditions in the laboratory:

Items	Required	Actual
Temperature (°C)	18-25	21± 2
Humidity (%RH)	30-70	55±2

#### 2. SAR Measurement System

#### 2.1. COMOSAR System Description



The COMOSAR system for performing compliance tests consists of the following items:

A standard high precision 6-axis robot with controller, teach pendant and software.

An arm extension for accommodating the data acquisition electronics (DAE).

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection,

collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital Communicate to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

A computer running WinXP and the Opensar software.

Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

The phantom, the device holder and other accessories according to the targeted measurement.

#### 2.1.1. Applications

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

#### 2.1.2. Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 10mm² step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE 1528-2003, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

#### 2.1.3. Zoom Scan (Cube Scan Averaging)

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/m³ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications utilize a physical step of 7x7x7 (5mmx5mmx5mm) providing a volume of 30mm in the X & Y axis, and 30mm in the Z axis.

#### 2.1.4. Uncertainty of Inter-/Extrapolation and Averaging

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Post processor, COMOSAR allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x,y,z) = Ae^{-\frac{z}{2a}}\cos^2\left(\frac{\pi}{2}\frac{\sqrt{x'^2 + y'^2}}{5a}\right)$$

$$f_2(x,y,z) = Ae^{-\frac{z}{a}}\frac{a^2}{a^2 + x'^2}\left(3 - e^{-\frac{2z}{a}}\right)\cos^2\left(\frac{\pi}{2}\frac{y'}{3a}\right)$$

$$f_3(x,y,z) = A\frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2}\left(e^{-\frac{2z}{a}} + \frac{a^2}{2(a+2z)^2}\right)$$

#### 2.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dissymmetric probe manufactured by SATIMO.

The probe is specially designed and calibrated for use in liquid with high permittivity. The dissymmetric probe has special calibration in liquid at different frequency.

SATIMO conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN62209-1, IEC 62209, etc.) Under ISO17025. The calibration data are in Appendix D.

#### 2.2.1. Isotropic E-Field Probe Specification

Model	EP165		
Manufacture	SATIMO		
frequency	0.03 GHz-3 GHz Linearity:±0.2dB(30MHz-3 GHz)		
Dynamic Range	0.01W/Kg-100W/Kg Linearity:±0.2dB		
Dimensions	Overall length:330mm Length of individual dipoles:4.5mm Maximum external diameter:8mm Probe Tip external diameter:5mm Distance between dipoles/ probe extremity:2.7mm		
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 3 GHz with precision of better 30%.		

#### 2.3. Robot

The COMOSAR system uses the KUKA robot from SATIMO SA (France). For the 6-axis controller COMOSAR system, the KUKA robot controller version from SATIMO is used.

The XL robot series have many features that are important for our application:

High precision (repeatability 0.02 mm)

High reliability (industrial design)

Jerk-free straight movements

Low ELF interference (the closed metallic

construction shields against motor control fields)

6-axis controller

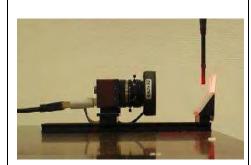


#### 2.4. Video Positioning System

The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts. The camera is piloted by the main computer with firewire link.

During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

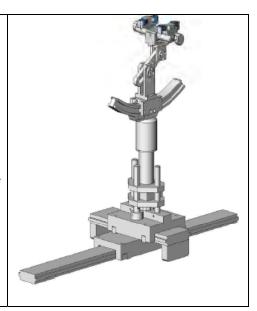


#### 2.5. Device Holder

The COMOSAR device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity  $\epsilon r=3$  and loss tangent  $\delta=0.02$ . The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



#### 2.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

Left head Right head Flat phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

Report No.:AGC00197130701FH01 Page 13 of 161

## 3. Tissue Simulating Liquid

## 3.1. The composition of the tissue simulating liquid

Ingredient	850MHz	850MHz	1900MHz	1900MHz	2450MHz	2450MHz
(% Weight)	Head	Body	Head	Body	Head	Body
Water	40.45	52.4	54.90	40.5	46.7	73.2
Salt	1.42	1.40	0.18	0.50	0.00	0.04
Sugar	57.6	45.0	0.00	58.0	0.00	0.00
HEC	0.40	1.00	0.00	0.50	0.00	0.00
Preventol	0.10	0.20	0.00	0.50	0.00	0.00
DGBE	0.00	0.00	44.92	0.00	53.3	26.7
TWEEN	0.00	0.00	0.00	0.00	0.00	0.00

#### 3.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using COMOSAR Dielectric Probe Kit and R&S Network Analyzer ZVL6 .

Tissue Stimulant Measurement for GSM 850							
Frequency (MHz)	Parts	Description	Dielectric F	Tissue Temp [°C]			
850MHz	Body	Reference result ±5% window	εr 55.20 52.44-57.96	δ[s/m] 0.97 0.9215-1.0185	N/A		
		Jul.26, 2013	53.28	0.98	21		

Tissue Stimulant Measurement for PCS 1900							
Frequency (MHz)	Parts	Description	Dielectric F	Tissue Temp [°C]			
1900MHz	Body	Reference result ±5% window	εr 53.30 50.635-55.965	δ[s/m] 1.52 1.444-1.596	N/A		
1900MHZ BOUY		Jul.26, 2013	52.62	1.51	21		

Tissue Stimulant Measurement for 2450							
Frequency (MHz)	Parts	Description	Dielectric F	Tissue Temp [°C]			
2450MHz	Body	Reference result ±5% window	εr 52.7 50.065-55.335	δ[s/m] 1.95 1.8525-2.0475	N/A		
243000112	,	Jul.26, 2013	53.62	1.93	21		

#### 3.3. Tissue Dielectric Parameters for Head and Body Phantoms

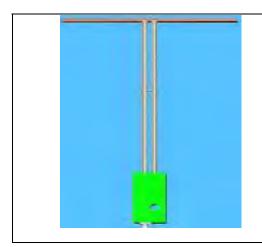
The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Target Frequency	ľ	nead	bo	ody
(MHz)	εr	σ (S/m)	εr	σ (S/m)
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
850	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	1.01	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

( $\epsilon r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho$  = 1000 kg/m3)

#### 4. SAR Measurement Procedure

## 4.1. SAR System Validation 4.1.1. Validation Dipoles



The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and Specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
900 MHz	149	83.3	3.6
1900MHz	68	39.5	3.6
2450MHz	51.5	30.4	3.6

Report No.:AGC00197130701FH01 Page 17 of 161

#### 4.1.2. Validation Result

System Perfo	System Performance Check at 850 MHz &1900MHz & 2450M for Body							
Validation Kit	:: SN 46/11DIP 0G900-	185						
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp.[°C]				
850 MHz	Reference result ± 10% window	10.9 9.81 to 11.99	6.99 6.29 to 7.69	N/A				
	Jul.26, 2013	10.88	6.68	21.0				
Validation Kit: SN 46/11DIP 1G900-187								
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp.[°C]				
1900 MHz	Reference result ± 10% window	39.7 35.73 to 43.67	20.5 18.45 to 22.55	N/A				
	Jul.26, 2013	38.75	20.66	21.0				
Validation Kit	:: SN 46/11DIP 2G450-	189						
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp.[°C]				
2450 MHz	Reference result ± 10% window	52.4 47.16 to 57.64	24.0 21.6 to 26.4	N/A				
	Jul.26, 2013	48.64	23.58	21				
Note: All SAR	values are normalized	to 1W forward power.						

Report No.:AGC00197130701FH01 Page 18 of 161

#### 4.2. SAR Measurement Procedure

The COMOSAR calculates SAR using the following equation,

$$SAR = \frac{\sigma |E|^2}{\rho}$$

σ: represents the simulated tissue conductivity

p: represents the tissue density

The EUT is set to transmit at the required power in line with product specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are larger than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR location (interpolated resolution set at 1mm<sup>2</sup>) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1mm<sup>3</sup>).

When multiple peak SAR location were found during the same configuration or test mode, Zoom scan shall performed on each peak SAR location, only the peak point with maximum SAR value will be reported for the configuration or test mode.

Report No.:AGC00197130701FH01 Page 19 of 161

### 5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 "Uncontrolled Environments" limits. These limits apply to a location which is deemed as "Uncontrolled Environment" which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

#### Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit
Spatial Peak SAR (1g cube tissue for brain or body)	1.60 W/kg

## 6. Test Equipment List

Equipment description	Manufacturer/Mo del	Identification No.	Current calibration date	Next calibration date	
SAR Probe	SATIMO	SN 04/13 EP165	01/31/2013	01/30/2014	
Phantom	SATIMO	SN_4511_SAM90	Validated. No cal required.	Validated. No cal required.	
Liquid	SATIMO	-	Validated. No cal required.	Validated. No cal required.	
Comm Tester	R&S - CMU200	069Y7-158-13-712	02/28/2013	02/27/2014	
Comm Tester	Agilent-8960	GB46310822	10/22/2012	10/21/2013	
Multimeter	Keithley 2000	1188656	02/28/2013	02/27/2014	
Dipole	SATIMOSID900	SN46/11 DIP 0G900-185	12/09/2011	12/08/2013	
Dipole	SATIMOSID1900	SN46/11 DIP 1G900-187	12/09/2011	12/08/2013	
Dipole	SATIMOSID2450	SN46/11 DIP 2G450-189	12/09/2011	12/08/2013	
Amplifier	Aethercomm	SN 046	12/08/2012	12/07/2013	
Signal Generator	Agilent-E4421B	MY43351603	05/13/2013	05/12/2014	
Power Probe	NRP-Z23	US38261498	02/28/2013	02/27/2014	
SPECTRUM ANALYZER	Agilent/E4440A	MY44303916	10/22/2012	10/21/2013	
Power Attenuator	BED	DLA-5W	07/16/2013	07/15/2014	
Network Analyzer	Rhode & Schwarz ZVA	SN100132	02/28/2013	02/27/2014	

Note: Per KDB 50824 Dipole SAR Validation Verification, AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

- 1. There is no physical damage on the dipole;
- 2. System validation with specific dipole is within 10% of calibrated value;
- 3. Return-loss is within 20% of calibrated measurement;
- 4. Impedance is within  $5\Omega$  of calibrated measurement.

## 7. Measurement Uncertainty

	7. Weasurement Oncertainty								
Mogaurom	ant uncorta					or 1 gram /	10 gram		
Measurern	ent uncerta		O IVITZ (O S	GHZ	averaged ov	er r gram <i>r</i>		<b>-</b>	(Vi
Error Description	Sec	Tol (±%)	Prob. Dist.	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g) (±%)	Std. Unc. (10g)(±%)	Ve ff
		Me	easuremer	nt Sys	stem				
Probe Calibration	E.2.1	6	N	1	1	1	6	6	00
Axial Isotropy	E.2.2	3	R	√3	$(1-c_p)^{1/2}$	$(1-c_p)^{1/2}$	1.22474	1.22474	00
Hemispherical Isotropy	E.2.2	5	R	√3	√C <sub>p</sub>	√C <sub>p</sub>	2.04124	2.04124	00
Boundary Effects	E.2.3	1	R	√3	1	1	0.57735	0.57735	00
Linearity	E.2.4	5	R	√3	1	1	2.88675	2.88675	00
System Detection Limits	E.2.5	1	R	√3	1	1	0.57735	0.57735	00
Readout Electronics	E.2.6	0.5	N	1	1	1	0.5	0.5	8
Response Time	E.2.7	0.2	R	√3	1	1	0.11547	0.11547	00
Integration Time	E.2.8	2	R	√3	1	1	1.1547	1.1547	00
RF Ambient Noise	E.6.1	3	R	√3	1	1	1.73205	1.73205	00
Probe Positioner Mechanical Tolerance	E.6.2	2	R	√3	1	1	1.1547	1.1547	00
Probe Positioning with Respect to Phantom Shell	E.63	1	R	√3	1	1	0.57735	0.57735	00
Extrapolation,interpolation and Integration Algorithms for Max. SAR Evaluation	E.5.2	1.5	R	√3	1	1	0.86603	0.86603	00
Dipole									
Device Positioning	8,E.4.2	1	N	√3	1	1	0.57735	0.57735	N- 1
Power Drift	8.6.6.2	2	R	√3	1	1	1.1547	1.1547	00
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4	R	√3	1	1	2.3094	2.3094	00
Liquid Conductivity (target)	E.3.2	5	R	√3	0.64	0.43	1.84752	1.2413	00
Liquid Conductivity (meas.)	E.3.3	2.5	N	1	0.64	0.43	1.6	1.075	00
Liquid Permittivity (target)	E.3.2	3	R	√3	0.6	0.49	1.03923	0.8487	00
Liquid Permittivity (meas.)	E.3.3	2.5	N	1	0.6	0.49	1.5	1.225	М
Combined Standard Uncertainty			RSS				8.09272	7.9296	
Expanded Uncertainty (95%CONFIDENCE INTERVAL)			k				16.18544	15.8592	

#### 8. Conducted Power Measurement

#### **GSM BAND**

Mode	Frequency(MHz)	Peak Power(dBm)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Po	wer <1>				•
	824.2	32.48	31.38	-9	22.38
GSM 850	836.6	32.53	31.44	-9	22.44
	848.8	32.33	31.33	-9	22.33
GPRS 850 (1 Slot)	824.2	32.37	31.32	-9	22.32
	836.6	32.23	31.25	-9	22.25
	848.8	32.28	31.24	-9	22.24
CDDC 050	824.2	29.74	28.57	-6	22.57
GPRS 850 (2 Slot)	836.6	29.68	28.52	-6	22.52
	848.8	29.53	28.43	-6	22.43
CDDC 050	824.2	27.62	26.56	-4.26	22.30
GPRS 850 (3 Slot)	836.6	27.59	26.54	-4.26	22.28
(3 3101)	848.8	27.53	26.53	-4.26	22.27
CDDC 050	824.2	26.33	25.62	-3	22.62
GPRS 850 (4 Slot)	836.6	26.46	25.45	-3	22.45
(4 3101)	848.8	26.47	25.41	-3	22.41
	1850.2	29.73	28.67	-9	19.67
PCS1900	1880	29.52	28.45	-9	19.45
	1909.8	29.54	28.48	-9	19.48
GPRS1900	1850.2	29.61	28.53	-9	19.53
(1 Slot)	1880	29.46	28.44	-9	19.44
(1 3101)	1909.8	29.52	28.53	-9	19.53
CDDC4000	1850.2	26.67	25.94	-6	19.94
GPRS1900 (2 Slot)	1880	26.53	25.73	-6	19.73
(2 3101)	1909.8	26.52	25.75	-6	19.75
CDDC1000	1850.2	24.63	24.42	-4.26	20.16
GPRS1900 (3 Slot)	1880	24.72	24.53	-4.26	20.27
(3 3101)	1909.8	24.45	24.37	-4.26	20.11
GPRS1900	1850.2	23.53	22.63	-3	19.63
(4 Slot)	1880	23.62	22.55	-3	19.55
(+ OlUL)	1909.8	23.53	22.52	-3	19.52

Note 1:

The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots. The calculated methods are show as following:

Frame Power = Max burst power (1 Up Slot) – 9 dB

Frame Power = Max burst power (2 Up Slot) – 6 dB

Frame Power = Max burst power (3 Up Slot) – 4.26 dB

Frame Power = Max burst power (4 Up Slot) - 3 dB

#### **UMTS BAND II**

Mode	Frequency (MHz)	Peak Power	Avg.Burst Power	
14/ODA44 4000	1852.4	23.56	22.65	
WCDMA 1900	1880	23.63	22.71	
RMC	1907.6	23.61	22.69	
MODIMA 4000	1852.4	23.47	22.24	
WCDMA 1900	1880	22.42	22.24	
AMR	1907.6	22.52	22.12	
LIODDA	1852.4	22.57	22.26	
HSDPA	1880	22.64	22.16	
Subtest 1	1907.6	22.74	22.22	
	1852.4	22.63	22.27	
HSDPA	1880	22.52	22.23	
Subtest 2	1907.6	22.63	22.26	
	1852.4	22.47	22.22	
HSDPA	1880	22.32	22.26	
Subtest 3	1907.6	22.46	22.32	
	1852.4	22.43	22.21	
HSDPA	1880	22.34	22.23	
Subtest 4	1907.6	22.36	22.25	
	1852.4	22.31	22.24	
HSUPA	1880	22.32	22.16	
Subtest 1	1907.6	22.36	22.13	
	1852.4	22.34	22.17	
HSUPA	1880	22.26	22.07	
Subtest 2	1907.6	22.35	22.22	
	1852.4	22.32	22.16	
HSUPA	1880	22.37	22.25	
Subtest 3	1907.6	22.43	22.26	
	1852.4	22.52	22.32	
HSUPA	1880	22.36	22.15	
Subtest 4	1907.6	22.42	22.13	
	1852.4	22.78	22.57	
HSUPA -	1880	22.63	22.43	
Subtest 5	1907.6	22.45	22.26	

#### **UMTS BAND V**

Mode	Frequency (MHz)	Peak Power	Avg.Burst Power
	826.4	23.62	23.34
WCDMA 850	835.0	23.51	23.32
RMC	846.6	23.44	23.16
14/00144 050	826.4	23.48	23.19
WCDMA 850	835.0	22.41	22.07
AMR	846.6	22.42	22.11
110000	826.4	22.60	22.31
HSDPA	835.0	22.51	22.23
Subtest 1	846.6	22.55	22.32
11000	826.4	22.49	22.26
HSDPA	835.0	22.53	22.30
Subtest 2	846.6	22.49	22.26
	826.4	22.50	22.22
HSDPA	835.0	22.48	22.16
Subtest 3	846.6	22.68	22.37
	826.4	22.66	22.34
HSDPA	835.0	22.44	22.12
Subtest 4	846.6	22.52	22.21
	826.4	22.42	22.14
HSUPA	835.0	22.43	22.03
Subtest 1	846.6	22.34	22.06
	826.4	22.38	22.04
HSUPA	835.0	22.32	21.99
Subtest 2	846.6	22.36	22.04
LIOLIBA	826.4	22.40	22.12
HSUPA	835.0	22.39	22.08
Subtest 3	846.6	22.31	22.00
LIOLIDA	826.4	22.51	22.22
HSUPA	835.0	22.37	22.07
Subtest 4	846.6	22.35	22.09
LICLIDA	826.4	22.51	22.33
HSUPA	835.0	22.44	22.33
Subtest 5	846.6	22.41	22.30

#### WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg.Burst Power
		01	2412	16.93
802.11b	1	06	2437	16.95
		11	2462	17.04
	6	01	2412	15.33
802.11g		06	2437	15.75
		11	2462	16.37
	6.5	01	2412	15.12
802.11n(20)		06	2437	15.58
		11	2462	16.27
		03	2422	13.13
802.11n(40)	13.5	06	2437	13.52
		09	2452	13.26

Report No.:AGC00197130701FH01

Page 26 of 161

According to 3GPP 25.101 sub-clause 6.2.2 , the maximum output power is allowed to be reduced by following the table.

Table 6.1aA: UE maximum output power with HS-DPCCH and E-DCH

-	Table of an a of maximum carpat perior marrie by corraina from							
	UE Transmit Channel Configuration	CM(db)	MPR(db)					
	For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	0≤ CM≤3.5	MAX(CM-1,0)					
	Note: CM=1 for $\beta_c/\beta_d$ =12/15, $\beta_{hs}/\beta_c$ =24/15.For all other combinations of DPDCH, DPCCH,							
	HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.							

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX\_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

Report No.:AGC00197130701FH01

Page 27 of 161

#### 9. Test Results

#### 9.1. SAR Test Results Summary

#### 9.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE1528, and Body SAR was performed with the device 0mm from the phantom. Body SAR was also performed with the headset attached and without.

#### 9.1.2. Operation Mode

- •According to KDB 447498 D01 v05r01 ,for each exposure position, if the highest 1-g SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional.
- •According to KDB 447498 D01 v05r01, If the devices display and overall diagonal dimension > 20 cm, the test separation distance is normally determined by the closest separation between the antenna and the user, so SAR was performed with the device 0mm from the phantom. The test devices overall diagonal dimension is 20.5 cm, apply to this test method.
- •Per KDB 865664 D01 v01r01,for each frequency band, if the measured SAR is ≥0.8W/Kg, testing for repeated SAR measurement is required .
- •Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call mode is selected to be test.
- •According to KDB 648474 D04 v01r01,when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤1.2W/Kg, SAR testing with a headset connected is not required.
- Maximum Scaling SAR in order to calculate the Maximum SAR values to test under the standard Peak Power, Calculation method is as follows:
- Maximum Scaling SAR =tested SAR (Max.)  $\times$  (GSM standard Peak Power (mw)/ tested Max. Peak Power (mw))

### 9.1.3. SAR Test Results Summary

SARI	MEASUREMENT						
Ambie	ent Temperature (°C) : 2	21 ± 2	Relative Humidity (%): 55				
Liquid	Temperature (°C) : 21	± 2	Depth of Liqui	d (cm):>15			
Produ	ct: 7inch Tablet PC						
Test N	Mode: GSM850 with GM	1SK modulat	tion				
0114	T (D " D )	Antenna	Frequ	iency	Power	SAR	Limit
SIM	SIM Test Position Body Position channel M				Drift (<±5%)	(1g) (W/kg)	(W/kg)
			128	824.2			
	Back Touch	Fixed	190	836.6	-0.14	0.413	1.6
			251	848.8			
		Fixed	128	824.2			
	Horizontal near antenna (1)		190	836.6	-1.25	0.159	1.6
			251	848.8			
	_	Fixed	128	824.2			
<1>	Horizontal away from antenna(2)		190	836.6	-0.01	0.004	1.6
	antonna(2)		251	848.8			
			128	824.2			
	Vertical near antenna (3)	Fixed	190	836.6	-0.24	0.081	1.6
	(6)		251	848.8			
			128	824.2			
	Vertical away from antenna (4)	Fixed	190	836.6	1.41	0.025	1.6
	antenna (4)		251	848.8			

Note1: Note: when the 1-g SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225. Note 2: above test model see the Photographs

SAR MEASUREMENT	
Ambient Temperature (°C) : 21 ± 2	Ambient Temperature (°C) : 21 ± 2
Liquid Temperature (°C) : 21 ± 2	Liquid Temperature (°C) : 21 ± 2
Product: 7inch Tablet PC	

Test Mode: PCS 1900 with GMSK modulation

SIM	Test Position Body	Antenna	Freq	uency	Power Drift	SAR (1g)	Limit
		Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
			512	1850.2			
	Back Touch	Fixed	661	1880.0	0.72	0.714	1.6
			810	1909.8			
			512	1850.2			
	Horizontal near antenna (1)	Fixed	661	1880.0	-0.13	0.261	1.6
	( )		810	1909.8			
		Fixed	512	1850.2			
<1>	Horizontal away from antenna(2)		661	1880.0	1.41	0.009	1.6
	,		810	1909.8			
			512	1850.2			
	Vertical near antenna (3)	Fixed	661	1880.0	-0.79	0.127	1.6
	( )		810	1909.8			
			512	1850.2			
	Vertical away from antenna (4)	Fixed	661	1880.0	-0.23	0.037	1.6
			810	1909.8			

Note1: when the 1-g SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225. Note 2: above test model see the Photographs

SAR MEASUREMENT					
Ambient Temperature (°C) : 21 ± 2	Relative Humidity (%): 55				
Liquid Temperature (°C) : 21 ± 2	Depth of Liquid (cm):>15				

Product: 7inch Tablet PC

Test Mode: WCDMA Band II with QPSK modulation

Configuration			Antenna Position	Frequ	Frequency		SAR (1g)	Limit (W/kg)		
SIM	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(VV/Kg)		
		RMC		9262	1852.4	1.23	1.053	1.6		
		(towards	Fixed	9400	1880	-0.78	1.144	1.6		
		grounds)		9538	1907.6	-1.36	0.870	1.6		
		Horizontal		9262	1852.4					
		near antenna (1)	Fixed	9400	1880	-0.85	0.576	1.6		
				9538	1907.6					
		Horizontal away from antenna (2)	Fixed	9262	1852.4					
<1>	Body			9400	1880	-0.67	0.036	1.6		
				9538	1907.6					
		Vertical near		9262	1852.4					
		antenna	Fixed	9400	1880	0.24	0.242	1.6		
		(3)		9538	1907.6					
		Vertical		9262	1852.4					
		away from antenna (4)	Fixed	9400	1880	-1.36	0.224	1.6		
			itenna (4)	9538	1907.6					

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

SAR MEASUREMENT	
Ambient Temperature (°C) : 21 ± 2	Relative Humidity (%): 55
Liquid Temperature (°C) : 21 ± 2	Depth of Liquid (cm):>15
Product: 7inch Tablet PC	

Test Mode: WCDMA Band V with QPSK modulation

Configuration			Antenna	Frequ	Frequency		SAR (1g)	Limit
SIM	Position	Status	Position	channel	MHz	Drift (<±5%)	(W/kg)	(W/kg)
		RMC		4132	826.4			
		(towards	Fixed	4182	835.0	-0.13	0.675	1.6
		grounds)		4233	846.6		-	
		Horizontal	Fixed	4132	826.4			
		near antenna (1)		4182	835.0	-0.25	0.260	1.6
				4233	846.6		-	
		Horizontal away from antenna (2)	Fixed	4132	826.4			
<1>	Body			4182	835.0	0.45	0.009	1.6
				4233	846.6			
				4132	826.4		-	
		antenna	Fixed	4182	835.0	-0.36	0.135	1.6
		(3)		4233	846.6		-	
		Vertical away		4132	826.4			
		from antenna (4)	Fixed	4182	835.0	-0.87	0.039	1.6
			(4)	4233	846.6			

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Repeated SAR										
Ambient Temperature (°C) : 21 ± 2 Relative Humidity (%): 55										
Liquid	Temperatu	ıre (°C) : 21 ±	2			Depth of Liqui	d (cm):>15			
Produ	ct: 7inch Ta	ablet PC								
Test Mode: WCDMA Band II with QPSK modulation										
Configuration			Antenna	Frequency		Power Drift	SAR (1g)	Limit		
SIM	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)		
		RMC		9262	1852.4	-0.13	0.964	1.6		
<1>	Body	(towards	Fixed	9400	1880	-0.06	1.102	1.6		
	grounds) 9538 1907.6 -1.45 0.869 1.6									
NOTE	: DUE TO	THE maximun	n SAR is <1.	45W/Kg, the	ere is only te	est once repeate	d SAR.			

SAR MEASUREMENT	
Ambient Temperature (°C) : 21 ± 2	Relative Humidity (%): 55
Liquid Temperature (°C) : 21 ± 2	Depth of Liquid (cm):>15
Product: 7inch Tablet PC	

Test Mode: 802.11b

Configuration			Antenna	Frequency		Power Drift	SAR (1g)	Limit
Test Mode	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
	Body Back	1 1//	Fixed	1	2412		-	
				6	2437	0.11	0.130	1.6
000 116				11	2462			
802.11b	Body Front		Fixed	1	2412			
				6	2437	-0.96	0.115	1.6
		TIOIL		11	2462			

Note1: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.

Note2: IEEE802.11b support DBPSK, DQPSK, CCK modulation mode, IEEE802.11g/n support OFDM, 16-QAM, 64-QAM modulation mode.

Ambient Temperature (°C): 21 ± 2

Liquid Temperature (°C): 21 ± 2

Product: 7inch Tablet PC

Relative Humidity (%): 55

Depth of Liquid (cm):>15

Test Mode: 802.11g

Configuration		Antenna	Frequency		Power Drift	SAR (1g)	Limit	
Test Mode	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
	Body Back	3 1 1//	Fixed	1	2412			
				6	2437	-0.19	0.258	1.6
000 11~				11	2462			
802.11g	Body Front		Fixed	1	2412			
				6	2437	0.43	0.166	1.6
				11	2462		-	

Note1: when the 1-g SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional.

Note2: IEEE802.11b support DBPSK, DQPSK, CCK modulation mode, IEEE802.11g/n support OFDM,

16-QAM, 64-QAM modulation mode.

Ambient Temperature (°C): 21 ± 2

Liquid Temperature (°C): 21 ± 2

Product: 7inch Tablet PC

Relative Humidity (%): 55

Depth of Liquid (cm):>15

Test Mode: 802.11n(20)

Configuration			Antenna	Frequency		Power Drift	SAR (1g)	Limit
Test Mode	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
	Body Back		Fixed	1	2412			
				6	2437	1.63	0.263	1.6
802.11n				11	2462			
(20)	Body Front		Fixed	1	2412			
				6	2437	-0.85	0.167	1.6
				11	2462			

Note1: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.

Note2: IEEE802.11b support DBPSK, DQPSK, CCK modulation mode, IEEE802.11g/n support OFDM,

16-QAM, 64-QAM modulation mode.

Ambient Temperature (°C): 21 ± 2

Liquid Temperature (°C): 21 ± 2

Product: 7inch Tablet PC

Relative Humidity (%): 55

Depth of Liquid (cm):>15

Test Mode: 802.11n(40)

Configuration			Antenna	Frequency		Power Drift	SAR (1g)	Limit
Test Mode	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
	Body Back		Fixed	1	2412			
				6	2437	1.32	0.175	1.6
802.11n				11	2462			
(40)	Body Front		Fixed	1	2412			
				6	2437	-0.86	0.106	1.6
				11	2462			

Note1: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.

Note2: IEEE802.11b support DBPSK, DQPSK, CCK modulation mode, IEEE802.11g/n support OFDM,

16-QAM, 64-QAM modulation mode.

Ambient Temperature (°C): 21 ± 2

Liquid Temperature (°C): 21 ± 2

Product: 7inch Tablet PC

Relative Humidity (%): 55

Depth of Liquid (cm):>15

Test Mode: Hotspot

Configuration		Antenna	Frequency		Power Drift	SAR (1g)	Limit	
Test Mode	Position	Status	Position	channel	MHz	(<±5%)	(W/kg)	(W/kg)
		1 1/1	Fixed	1	2412			
	Body Back			6	2437	-0.63	0.236	1.6
Hotopot	Buok			11	2462			
Hotspot		Body Front MS	MS Fixed	1	2412			
				6	2437	0.78	0.146	1.6
				11	2462			

Note: when the 1-g SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional.

Page 38 of 161

# **Simultaneous Multi-band Transmission Evaluation:**

**Application Simultaneous Transmission information:** 

Position	Simultaneous state
	1. WWAN(voice)+WLAN 2.4GHz band
Body	2. WWAN(voice)+ HOTSPOT 2.4GHz band
	3. WWAN(voice)+Bluetooth

#### NOTE:

- 1. WLAN and BT share the same antenna, and cannot transmit simultaneously.
- 2. Simultaneous with every transmitter must be the same test position.
- 3. Based upon KDB 447498 D01 v05, BT SAR is excluded as below table.
- 4. Based upon KDB 447498 D01 v05, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user; which is 0mm for head SAR AND 5mm for body-worn SAR.
- 5. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
- 6. For minimum test separation distance  $\leq$  50mm, Bluetooth standalone SAR is excluded according to [(max. power of channel, including tune-up tolerance, mW)/ (min. test separation distance, mm)  $\cdot \lceil \sqrt{f} (GHz) / x \rceil \leq 3.0$  for 1-g SAR and  $\leq$  7.5 for 10-g extremity SAR
- 7. KDB 447498 / 4.3.2 (2) when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
  - a) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]· $[\sqrt{f} (GHz)/x]$  W/kg for test separation distances 50 mm; Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
  - b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

		Maximum Average Power		Antenna	SAR exclusion	SAR testing required	Body
		dBm	mW	to user (mm)	threshold (mW)	(Yes/No)	(5mm gap)
вт	Body	5.03	3.184	5	10	NO	0.1316 W/kg

Maximum test results (WWAN) with BT and WIFI/HOTSPOT Simultaneous Transmission SAR:

BT: Body (0.5 cm gap): 0.1316 W/kg

Body (WWAN (voice) +BT): 1.144 W/kg +0.1316 W/kg = 1.2756 W/kg

# WIFI/ HOTSPOT

Body					
Conditions (SAR1+SAR2)	Position	Max. SAR1	Max. SAR2	SAR Summation	Limit (W/kg)
GSM850+ WIFI (voice)	Back Touch	0.413	0.263	0.676	1.6
PCS1900+ WIFI (voice)	Back Touch	0.714	0.263	0.977	1.6
WCDMA Band II + WIFI (voice)	RMC (towards grounds)	1.144	0.263	1.407	1.6
WCDMA Band V + WIFI (voice)	RMC (towards grounds)	0.675	0.263	0.939	1.6

Page 40 of 161

# Appendix A. SAR System Validation Data

Test Laboratory: AGC Lab Date: Jul.26, 2013

System Check Body 850 MHz

DUT: Dipole 900 MHz Type: SID 900

Communication System CW; Communication System Band: D850 (850.0 MHz); Duty Cycle: 1:1; Conv.F=5.46 Frequency: 850 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98$ mho/m;  $\epsilon r = 53.28$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=10dBm Ambient temperature (°C): 21, Liquid temperature (°C): 21

# SATIMO Configuration:

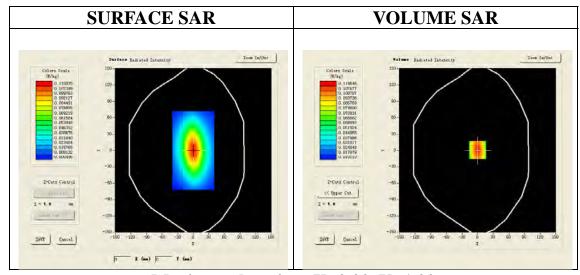
Probe: EP165; Calibrated: 01/31/2013

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

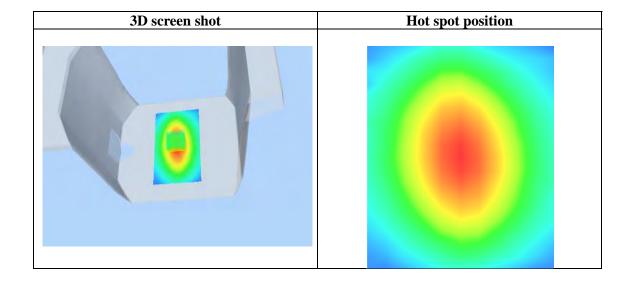
Configuration/System Check GSM 850 Body/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check GSM 850 Body/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm



Maximum location: X=0.00, Y=1.00

SAR 10g (W/Kg)	0.066791
SAR 1g (W/Kg)	0.108814

Z (mm)	0.00	4.00	9.00	14.00	19.00		
SAR (W/Kg)	0.0000	0.1153	0.0721	0.0464	0.0298		
	SAR, Z Axis Scan $(X = 0, Y = 1)$						
C	). 11 –						
C	. 10 -	$\longrightarrow$					
/kg)	). 08 –	+					
SAR (W/kg)	). 06 -						
C	0.04-						
o	0.00 2.5 5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0		
	Z (mm)						



Date: Jul.26, 2013

Page 42 of 161

Test Laboratory: AGC Lab System Check Body 1900MHz

DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=4.84 Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51$  mho/m;  $\epsilon = 52.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=10dBm Ambient temperature ( $^{\circ}$ C): 21, Liquid temperature ( $^{\circ}$ C): 21

# SATIMO Configuration:

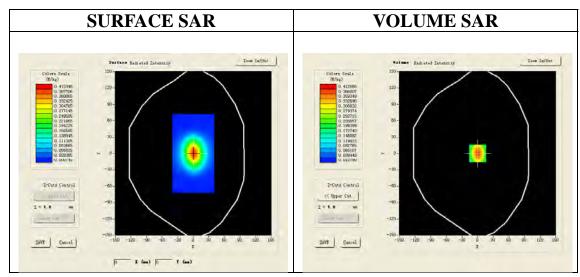
Probe: EP165; Calibrated: 01/31/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

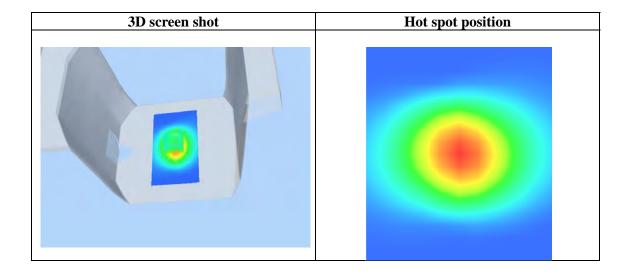
Configuration/System Check PCS1900 Body/Area Scan: Measurement grid: dx=8mm,dy=8mm Configuration/System Check PCS1900 Body/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm



Maximum location: X=0.00, Y=0.00

	,
SAR 10g (W/Kg)	0.206628
SAR 1g (W/Kg)	0.387456

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4135	0.2281	0.1274	0.0750
	SAR, 2	Axis Sca	n (X = 0,	¥ = 0)	
0	). 41 –				
C	). 35 -	$\longrightarrow$			
~ 0	). 30 –	+ $+$ $+$			-
(#/kg)	). 25 -	+			-
SAR	). 20 -	++	+	-+-	-
23.0	). 15 -		$\longrightarrow$		
0	). 10 -	$\perp \perp \perp$			
c	). 04 –				
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0					
Z (mm)					



Date: Jul.26, 2013

Page 44 of 161

Test Laboratory: AGC Lab System Check Body 2450 MHz

DUT: Dipole 2450 MHz Type: SID 2450

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=4.32 Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93$  mho/m;  $\epsilon r = 53.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=17dBm Ambient temperature ( $^{\circ}$ ): 21, Liquid temperature ( $^{\circ}$ ): 21

### **SATIMO Configuration:**

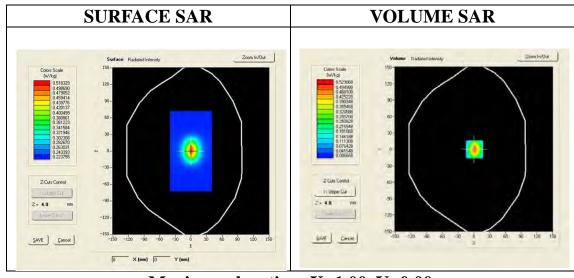
Probe: EP165; Calibrated: 01/31/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

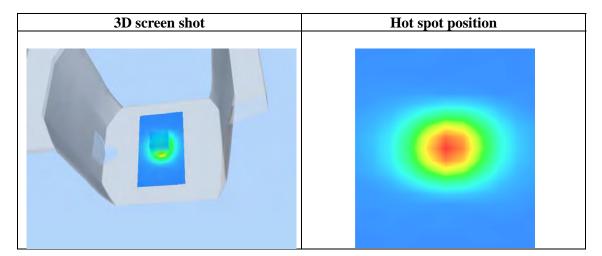
Configuration/System Check 2450 MHz Body/Area Scan: Measurement grid: dx=8mm,dy=8mm Configuration/System Check 2450 MHz Body/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm



Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	0.235784
SAR 1g (W/Kg)	0.486425

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.5308	0.3024	0.1756	0.1089
	SAR	, Z Axis Sc	an (X = 1, `	Y = 0)	
C	).5-				
	).4-				
	,				
	).3-				
SAB (Wkg)					
	).2-				-
0	).1-				
	0.0 2.5 5.	0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5.0
		Z	.' (mm)		



Page 46 of 161

# Appendix B. SAR measurement Data

Test Laboratory: AGC Lab Date: Jul.26, 2013

**GSM 850 Mid- Body- Touch** 

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.46; Frequency: 836.6 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98$ mho/m;  $\epsilon r = 53.28$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.0, Liquid temperature ( $^{\circ}$ C): 21.0

## **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

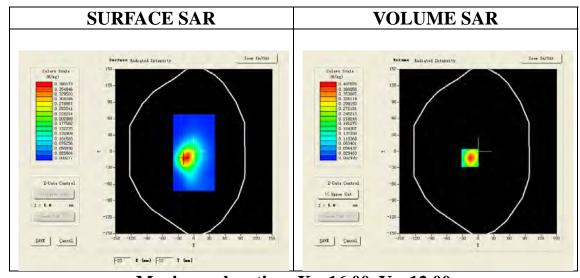
Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4 02 01

Configuration/GSM 850 Mid-Body-Touch/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/GSM 850 Mid-Body-Touch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

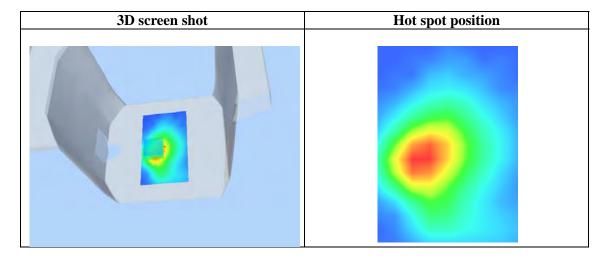
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	GSM 850		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



**Maximum location: X=-16.00, Y=-12.00** 

SAR 10g (W/Kg)	0.197585
SAR 1g (W/Kg)	0.412590

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4070	0.1896	0.0862	0.0415
	SAR, Z A	Axis Scan	(X = -16,	<b>∀</b> = −12)	
0	0. 41 -	<del>       </del>		- 1 - 1	
	). 35 –	$\longrightarrow$			
c	). 30 -	$\perp$			
		$\perp$			
≥ 0	). 25 -				
SAR	). 15 -				
	). 10 –				-
C	0.02 -	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0
	Z (mm)				



Page 48 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

GSM 850 Mid-Horizontal near antenna (MS) **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.46; Frequency: 836.6 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

### **SATIMO Configuration:**

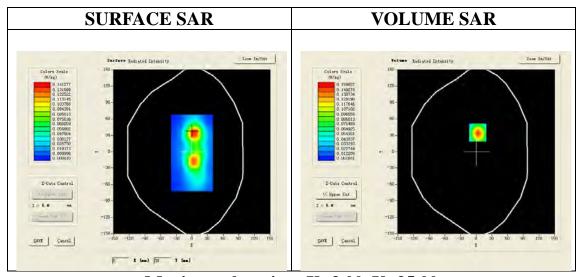
Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/GSM 850 Mid -Horizontal near antenna /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM 850 Mid-Horizontal near antenna /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

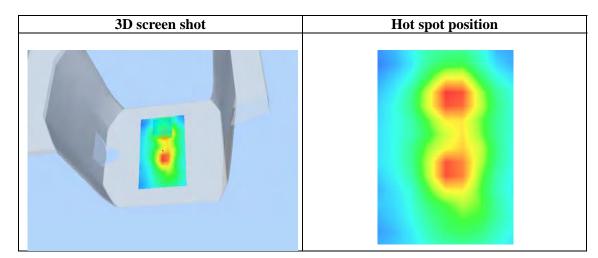
Area Scan	surf_sam_plan.txt	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast	
Phantom	Validation plane	
Device Position	Horizontal	
Band	GSM 850	
Channels	Middle	
Signal	TDMA (Crest factor: 8.0)	



Maximum location: X=3.00, Y=35.00

SAR 10g (W/Kg)	0.078033
SAR 1g (W/Kg)	0.159494

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1598	0.0843	0.0439	0.0236
	SAR, Z	Axis Scar	(X = 3,	Y = 35)	
0	). 16 –				
0	). 14-	$\longrightarrow$			
0	). 12 –	+			
(%)	. 10				
) €	). 10 -				
SAR	1. 08 -				
	1. 04 -				
1	7.04				
0	0.01-				]
	0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0				
	Z (mm)				



Page 50 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

GSM 850 Mid-Horizontal away from antenna (MS)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.46; Frequency: 836.6 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

### **SATIMO Configuration:**

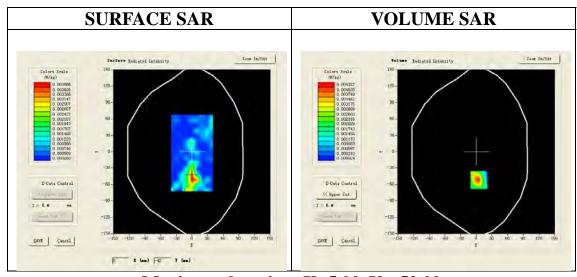
Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4\_02\_01

Configuration/GSM 850 Mid-Horizontal away from antenna /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM 850 Mid -Horizontal away from antenna /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

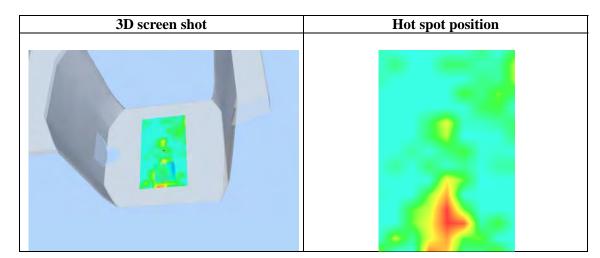
Area Scan	surf_sam_plan.txt	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast	
Phantom	Validation plane	
Device Position	Horizontal	
Band	GSM 850	
Channels	Middle	
Signal	TDMA (Crest factor: 8.0)	



Maximum location: X=5.00, Y=-52.00

SAR 10g (W/Kg)	0.002059
SAR 1g (W/Kg)	0.004429

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0043	0.0019	0.0009	0.0006
	SAR, Z	Axis Scan	(X = 5, Y)	7 = -52)	
	0. 0043 -	<u> </u>			
0	). 0040 -	<del>\                                    </del>			-
C	). 0035 -	$\rightarrow$			-
ي نو	). 0030 -	+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$			
(€	). 0030	$+\lambda$			-
<b>5</b> 0	). 0020 –	++			
	0.0015	+			
c	0.0010 -	+			
	). 0005 -	+++			
	0.0 2.5	5.0 7.5 10.0	0 12.5 15.0 17	.5 20.0 22.5 25	6.0
	Z (mm)				



Page 52 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

GSM 850 Mid-Vertical near antenna (MS) **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.46; Frequency: 836.6 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C):21, Liquid temperature ( $^{\circ}$ C):21

### **SATIMO Configuration:**

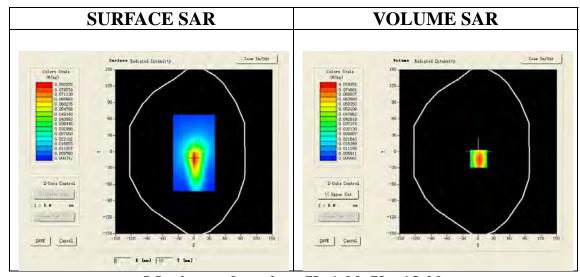
Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

# Configuration/GSM 850 Mid-Vertical near antenna /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM 850 Mid -Vertical near antenna /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

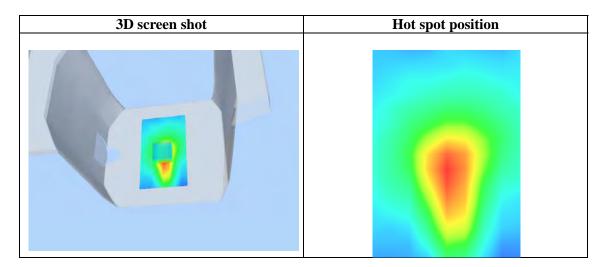
Area Scan	surf_sam_plan.txt	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast	
Phantom	Validation plane	
Device Position	Vertical	
Band	GSM 850	
Channels	Middle	
Signal	TDMA (Crest factor: 8.0)	



Maximum location: X=1.00, Y=-13.00

SAR 10g (W/Kg)	0.039580
SAR 1g (W/Kg)	0.081254

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0793	0.0368	0.0164	0.0075
	SAR, Z	Axis Scan	(X = 1, Y)	7 = -13)	
C	). 08 –				
(	0. 07 -	+	+		-
	). 06 –	$\perp$			
(A)	). 05 -	$+ \lambda +$			
≥ 0	0.04-	$\perp$			
	). 03 –	++	+		
c	). 02 –				-
	). 01 –	+			
(	). 00 -				
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0					
	Z (mm)				



Page 54 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

GSM 850 Mid-Vertical away from antenna (MS)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.46; Frequency: 836.6 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

### **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

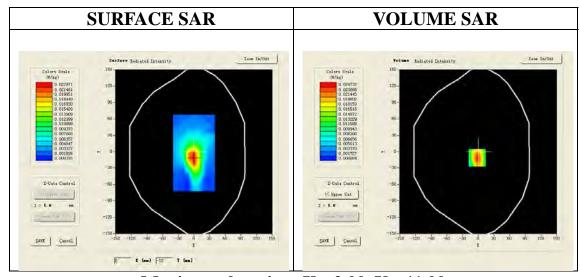
- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/GSM 850 Mid-Vertical away from antenna /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM 850 Mid -Vertical away from antenna /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

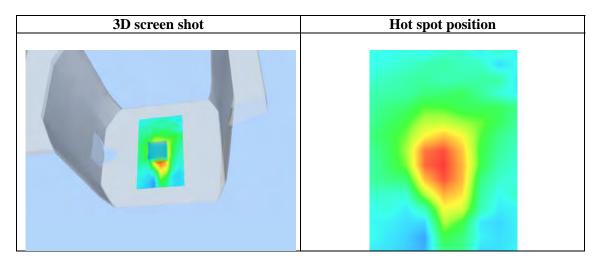
Area Scan	surf_sam_plan.txt	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast	
Phantom	Validation plane	
Device Position	Vertical	
Band	GSM 850	
Channels	Middle	
Signal	TDMA (Crest factor: 8.0)	



Maximum location: X=-2.00, Y=-11.00

SAR 10g (W/Kg)	0.011646
SAR 1g (W/Kg)	0.025096

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0247	0.0106	0.0041	0.0014
	SAR, Z	Axis Scan	(X = -2,	Y = -11)	
C	). 025 -				
C	). 020 -	$\overline{}$			-
//kg)	). 015 –	$+ \lambda +$			-
	0. 010 -	++			
c	). 005 –				-
c	0.000-	50 75 10 0	12 5 15 0 17	5 20.0 22.5 25	5 0
	0.0 2.0	0.0 1.0 10.0	Z (mm)	0 20.0 22.0 2.	



Page 56 of 161

Test Laboratory: AGC Lab
PCS 1900 Mid-Body- Touch
Date: Jul.26, 2013

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.84; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51$  mho/m;  $\epsilon = 52.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.0, Liquid temperature ( $^{\circ}$ C): 21.0

### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

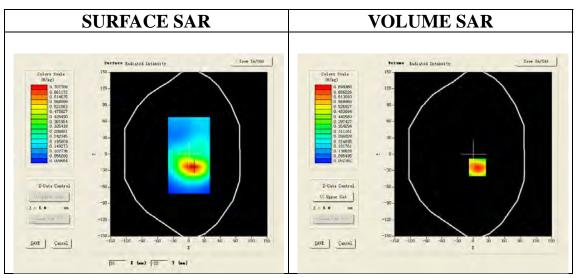
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4 02 01

Configuration/PCS1900 Mid-Body-Touch/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/PCS1900 Mid-Body-Touch/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

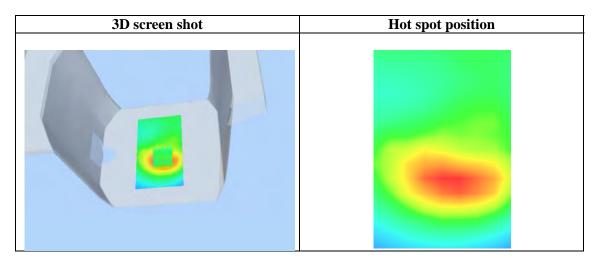
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	PCS 1900		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



Maximum location: X=8.00, Y=-24.00

<b>SAR 10g (W/Kg)</b>	0.423852	
SAR 1g (W/Kg)	0.713907	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.6951	0.4090	0.2437	0.1605
_		Axis Scan	(X = 8, Y)	7 = -24)	
0	. 7 -				
0	. 6 -	$\longrightarrow$			
	5-				
(%/kg) 0 0					
		+	+ + +		-
SAR 0	3-				
			$\sim$		
0	.2-				-
0	. 1 -				.
		.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5. 0
		7	(mm)		



Test Laboratory: AGC Lab Date: Jul.26, 2013

PCS 1900 Mid-Horizontal near antenna (MS) **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.84; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

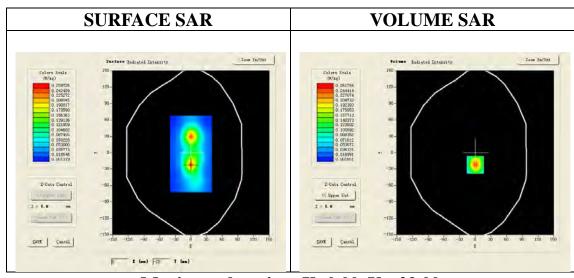
### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/PCS1900 Mid- Horizontal near antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/PCS1900 Mid- Horizontal near antenna /Zoom Scan: Measurement grid:dx=8mm, dy=8mm, dz=5mm;

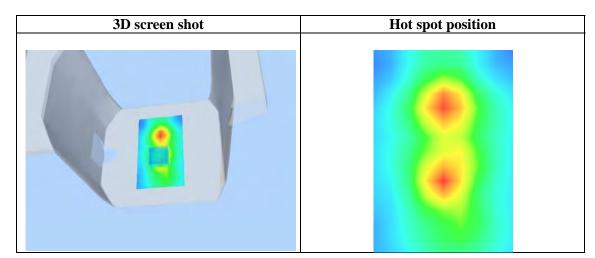
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Horizontal		
Band	PCS 1900		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



Maximum location: X=0.00, Y=-22.00

<b>SAR 10g (W/Kg)</b>	0.115952
SAR 1g (W/Kg)	0.261158

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2618	0.1159	0.0490	0.0216
	SAR, Z	Axis Scan	(X = 0, Y)	y = −22)	
C	). 26 -				-
C	). 20 -	$\longrightarrow$			
(#/kg)	). 15-	$+ \lambda +$			
	). 10 -	++			
C	). 05 -				
C	0.01 -     0.0 2.5 5		12.5 15.0 17.	5 20.0 22.5 25	5.0
			Z (mm)		



Page 60 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

PCS 1900 Mid-Horizontal away from antenna (MS)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.84; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

### SATIMO Configuration:

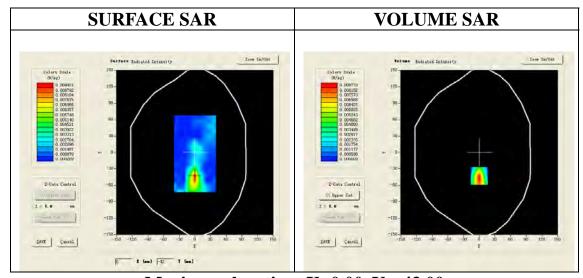
Probe: EP165; Calibrated: 01/31/2013

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/PCS1900 Mid- Horizontal away from antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

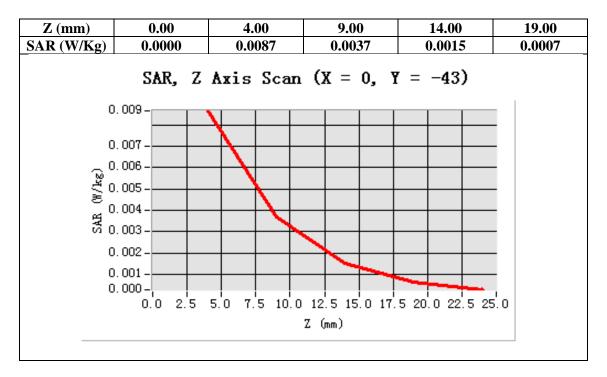
Configuration/PCS1900 Mid- Horizontal away from antenna /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

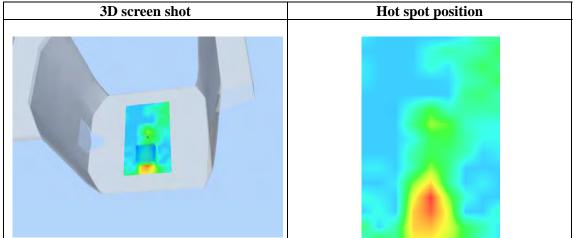
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Horizontal		
Band	PCS 1900		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



Maximum location: X=0.00, Y=-43.00

SAR 10g (W/Kg)	0.003902
SAR 1g (W/Kg)	0.008867





Test Laboratory: AGC Lab Date: Jul.26, 2013

PCS 1900 Mid-Vertical near antenna (MS) **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.84; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

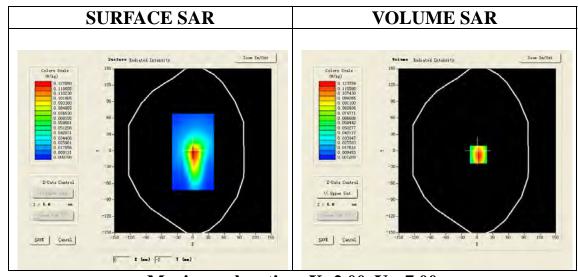
### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/PCS1900 Mid-Vertical near antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/PCS1900 Mid-Vertical near antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

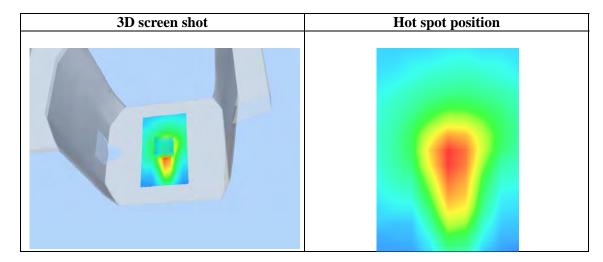
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Vertical		
Band	PCS 1900		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



Maximum location: X=2.00, Y=-7.00

SAR 10g (W/Kg)	0.062452	
SAR 1g (W/Kg)	0.126672	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1238	0.0583	0.0268	0.0129
	SAR, Z	Axis Scar	(X = 2,	Y = -7)	
0	). 12 –				
	). 10 -	$\backslash\!\!\!\backslash$			
AR (W/)k	0.06 -	+			_
	). 04 -				
	0.01 - 0.0 2.5 5			5 20.0 22.5 25	5. 0
			Z (mm)		



Test Laboratory: AGC Lab Date: Jul.26, 2013

PCS 1900 Mid-Vertical away from antenna (MS)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.84; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51$  mho/m;  $\epsilon r = 52.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

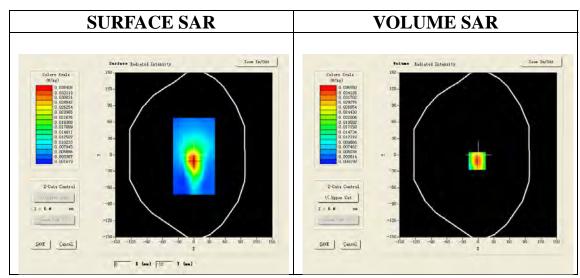
### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/PCS1900 Mid-Vertical away from antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/PCS1900 Mid-Vertical away from antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

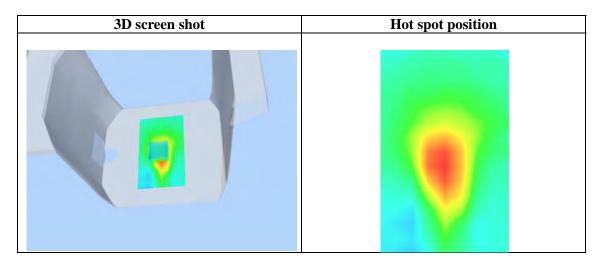
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Vertical			
Band	PCS 1900			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=-2.00, Y=-11.00

SAR 10g (W/Kg)	0.018071	
SAR 1g (W/Kg)	0.036841	

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	0.0365	0.0181	0.0083	0.0036	
	SAR, Z	Axis Scan	(X = -2,	Y = -11)		
C	0. 037 –					
SAR (W/kg)	030-					
C	0.001 -   0.00 2.5	5.0 7.5 10.0	   12.5 15.0 17.	5 20.0 22.5 25	5. 0	
	Z (mm)					



Page 66 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Low-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1852.4 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

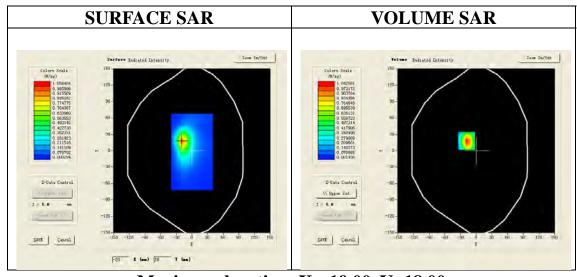
### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA band  $\, \, {
m II} \,$  Low-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band  $\, {
m II} \,$  Low-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

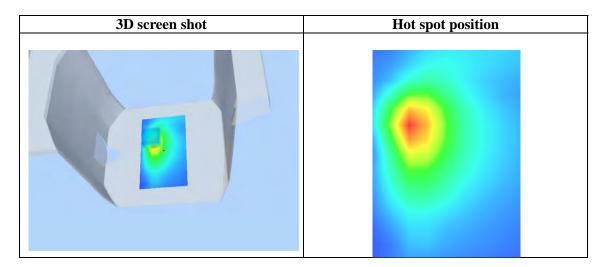
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	WCDMA band II			
Channels	Low			
Signal	TDMA (Crest factor: 1.0)			



**Maximum location: X=-19.00, Y=18.00** 

SAR 10g (W/Kg)	0.457835
SAR 1g (W/Kg)	1.052988

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	1.0426	0.4413	0.1793	0.0795	
	SAR, Z	Axis Scan	(X = −19,	¥ = 18)		
1	.0-					
0	). 8 -					
(#/kg)	). 6 -					
SAR (%	1. 4 -					
o	1.2-		$\downarrow\downarrow\downarrow$			
o	0.0	.0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5. 0	
	Z (mm)					



Page 68 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51$  mho/m;  $\epsilon r = 52.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

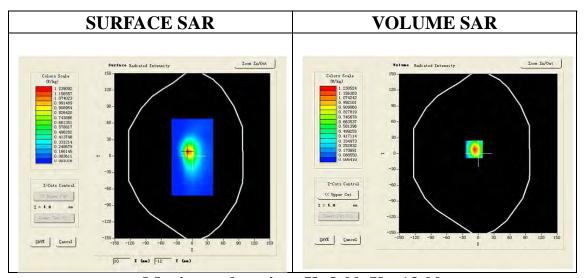
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA band  $\mbox{ II }$  Mid-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band  $\mbox{ II }$  Mid-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

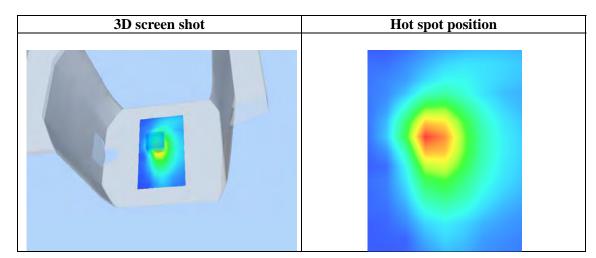
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	WCDMA band II			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



Maximum location: X=8.00, Y=-13.00

SAR 10g (W/Kg)	0.576285	
SAR 1g (W/Kg)	1.144093	

Z (mm)	0.00	4.00	9.00	14.00	19.00			
SAR (W/Kg)	0.0000	1.2385	0.6525	0.3443	0.1918			
	SAR, Z Axis Scan ( $X = 8$ , $Y = -13$ )							
1.	. 2-							
1.	. 0 -	$\backslash \bot \bot$						
(%) O.	. 8 -	$\perp \setminus \perp$	$\perp$					
SAR (#/kg)	. 6 -							
	. 4 -							
0.	.1-   0.0 2.5 5	.0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5.0			
			(mm)					



Page 70 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II High-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1907.6 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

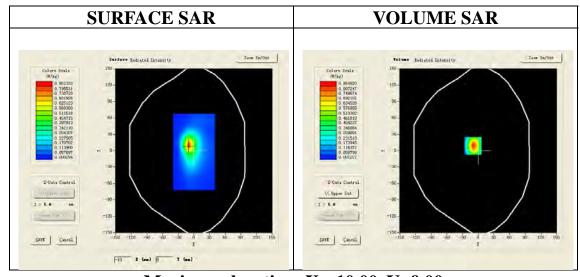
### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA band  $\ II$  High-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band  $\ II$  High-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

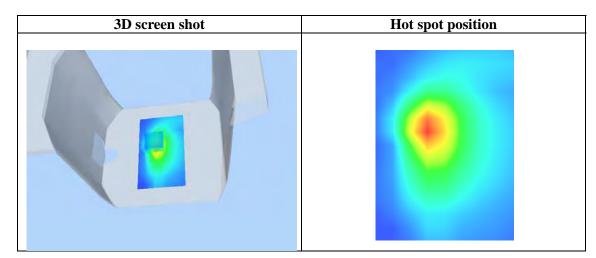
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	WCDMA band II		
Channels	High		
Signal	TDMA (Crest factor: 1.0)		



Maximum location: X=-10.00, Y=9.00

SAR 10g (W/Kg)	0.375952
SAR 1g (W/Kg)	0.870447

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.8648	0.3646	0.1464	0.0631
	SAR, Z	Axis Scan	(X = -10,	¥ = 9)	
0	. 9-				
0	. 7 -				
SAR (W/kg)	.5-		$\perp$		
≥ 0	. 4 -	+	+		
<b>₹</b> 0	. 3-		+		-
0	.2-		$\longrightarrow$		-
	. 1 -		+		-
	0.0 2.5 5	.0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5.0
		7	(mm)		



Page 72 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Horizontal near antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon r = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

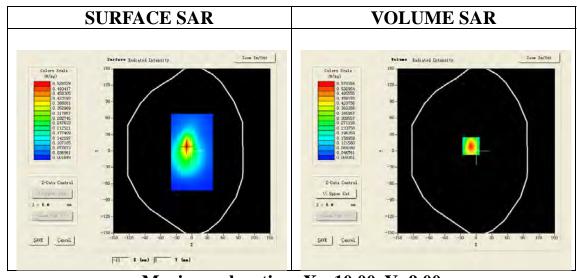
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band II Mid-Horizontal near antenna /Zoom Scan: Measurement grid:dx=8mm, dy=8mm, dz=5mm;

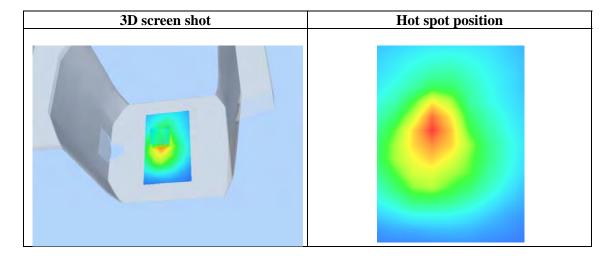
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Horizontal
Band	WCDMA Band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-10.00, Y=9.00

SAR 10g (W/Kg)	0.284665
SAR 1g (W/Kg)	0.575937

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	0.5704	0.2714	0.1351	0.0803	
	SAR, Z	Axis Scan	(X = -10,	¥ = 9)		
0	0.6-					
0	).5-					
~ 0	), 4 -					
SAR (W/kg)	1.3-					
SAR	1. 2 -					
	0. 1 –					
	0.1-					
	0.0 2.5 5	.0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5.0	
	Z (mm)					



Page 74 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Horizontal away from antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon r = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

# SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

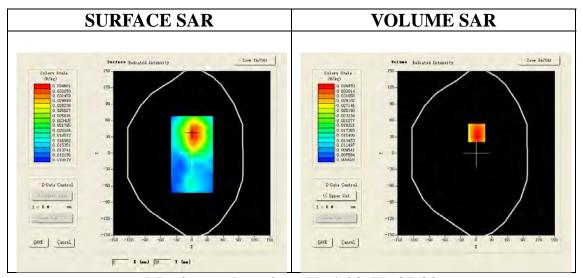
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band II Mid-Horizontal away from antenna /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

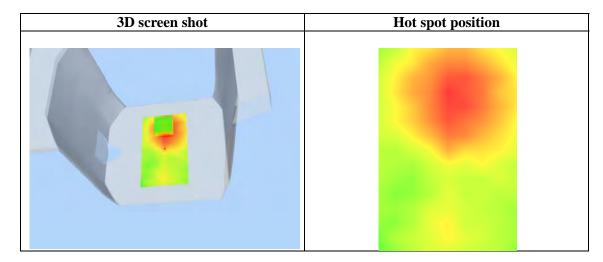
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Horizontal		
Band	WCDMA Band II		
Channels	Middle		
Signal	TDMA (Crest factor: 1.0)		



Maximum location: X=1.00, Y=37.00

SAR 10g (W/Kg)	0.024630
SAR 1g (W/Kg)	0.036378

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0349	0.0242	0.0168	0.0118
	SAR, Z	Axis Scar	(X = 1,	Y = 37)	
C	). 035 –				
c	). 030 –	$\longrightarrow$			
SAR (W/kg)	). 025 –	$+$ $\wedge$			
ව	). 020 -	<del>       </del>	$\overline{}$		-
N O	0.015				-
C	0.00 2.5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0
			Z (mm)		



Page 76 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Vertical near antenna **DUT: 7inch Tablet PC;** Type: **3G7** 

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon r = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

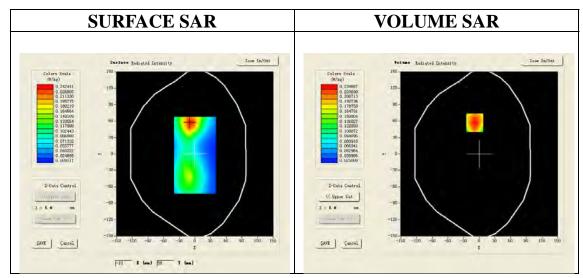
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

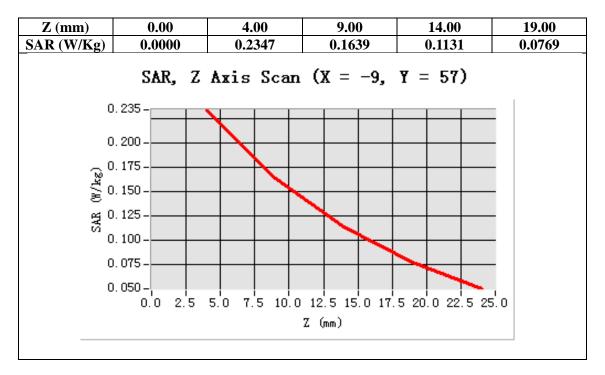
Configuration/WCDMA Band II Mid-Vertical near antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

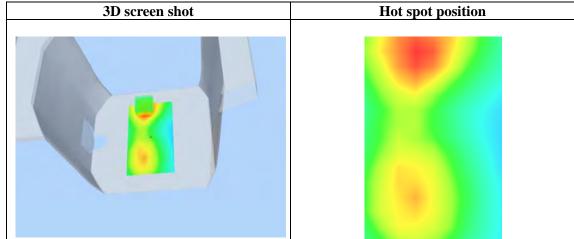
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Vertical		
Band	WCDMA Band II		
Channels	Middle		
Signal	TDMA (Crest factor: 1.0)		



Maximum location: X=-9.00, Y=57.00

<b>SAR 10g (W/Kg)</b>	0.158976
SAR 1g (W/Kg)	0.241975





Page 78 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Vertical away from antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon r = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

· Sensor-Surface: 4mm (Mechanical Surface Detection)

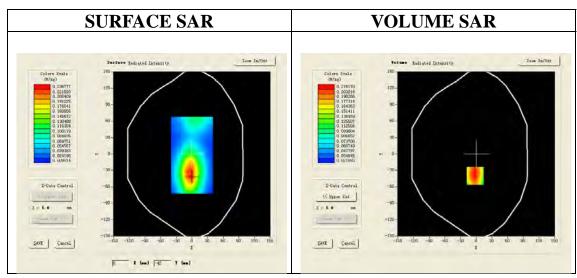
· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band  $\, \mathrm{II} \,$  Mid-Vertical away from antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/WCDMA Band II Mid-Vertical away from antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

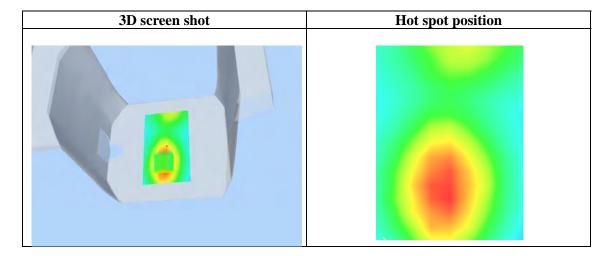
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Vertical		
Band	WCDMA Band II		
Channels	Middle		
Signal	TDMA (Crest factor: 1.0)		



Maximum location: X=-2.00, Y=-40.00

SAR 10g (W/Kg)	0.144360	
SAR 1g (W/Kg)	0.224044	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2162	0.1443	0.0972	0.0667
	SAR, Z	Axis Scan	(X = -2,	Y = -40)	
o	). 216 –				
O	). 200 -	+			-
С	). 175 -	+ $+$ $+$			
/kg)	). 150 – ). 125 –	$+ \mathcal{N}$			-
≥ 0	). 125 –	+	$\overline{}$		-
SAR 0	). 100 -				
	0. 075 -		+	+	-
o	0.045	50.75.40.0	10.5.45.0.47	5 20.0 22.5 25	-
	0.0 2.5	5.0 7.5 10.0	7 12.5 15.0 17. Z (mm)	5 20.0 22.5 25	5. U



Page 80 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band V Mid-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.46

Frequency: 835 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98$  mho/m;  $\epsilon r = 53.28$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

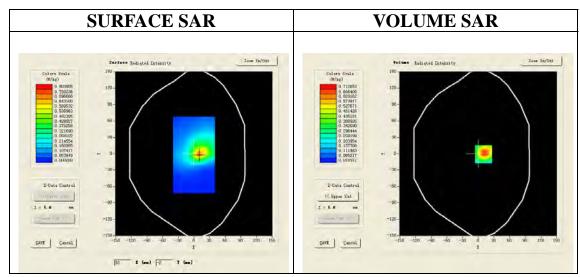
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA Band V Mid-Body-Front/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA Band V Mid-Body-Front/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

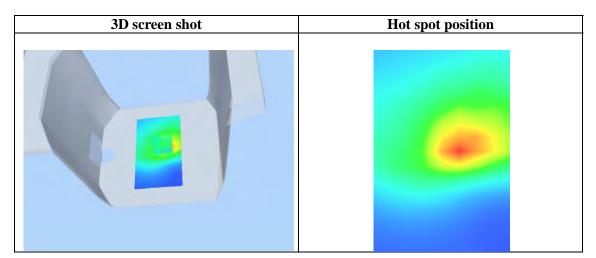
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	WCDMA Band V		
Channels	Middle		
Signal	TDMA (Crest factor: 1.0)		



Maximum location: X=10.00, Y=-1.00

SAR 10g (W/Kg)	0.362531	
SAR 1g (W/Kg)	0.675035	

Z (mm)	0.00	4.00	9.00	14.00	19.00			
SAR (W/Kg)	0.0000	0.7127	0.4061	0.2380	0.1503			
	SAR, Z Axis Scan $(X = 10, Y = -1)$							
0	. 7 –		1 1 1		-			
0	.6-	$\backslash \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$						
(%/kg) 0 (%/kg)	. 5 -				-			
€ 0	. 4 –	+			-			
SAR 0	.3-		$\downarrow \downarrow \downarrow \downarrow$					
0	.2-							
0	. 1 -							
		.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0			
	Z (mm)							



Page 82 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band V Mid-Horizontal near antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.46

Frequency: 835 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°ℂ):21, Liquid temperature (°ℂ):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

· Sensor-Surface: 4mm (Mechanical Surface Detection)

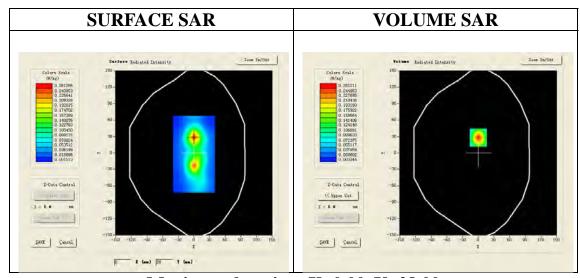
· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band  $\,V\,$  Mid- Horizontal near antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/WCDMA Band  $\,V\,$  Mid-Horizontal near antenna /Zoom Scan: Measurement grid:dx=8mm, dy=8mm, dz=5mm;

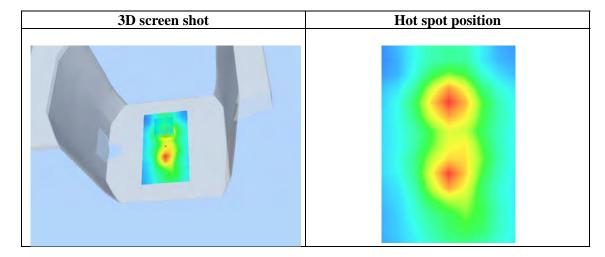
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Horizontal			
Band	WCDMA Band V			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



Maximum location: X=0.00, Y=28.00

SAR 10g (W/Kg)	0.128054
SAR 1g (W/Kg)	0.259975

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2622	0.1396	0.0736	0.0399
	SAR, Z	Axis Scar	(X = 0,	Y = 28)	
C	). 26 -				
	). 20 -	$\overline{}$			-
(#/kg)	). 15 -	$+\lambda+$			
SAR	). 10 -				
C	). 05 –				
C	0.02 -     0.0 2.5 5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0
		:	Z (mm)		



Page 84 of 161

Test Laboratory: AGC Lab

Date: Jul.26, 2013

WCDMA Band V Mid-Horizontal away from antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.46

Frequency: 835 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°ℂ):21, Liquid temperature (°ℂ):21

# SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

· Sensor-Surface: 4mm (Mechanical Surface Detection)

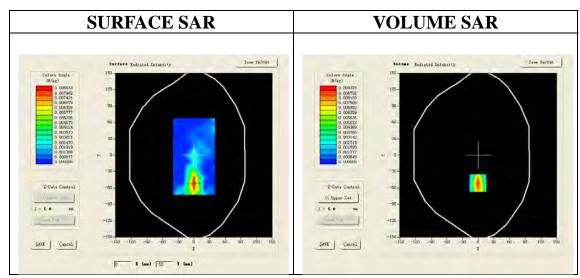
· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band  $\,V\,$  Mid- Horizontal away from antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/WCDMA Band V Mid-Horizontal away from antenna /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

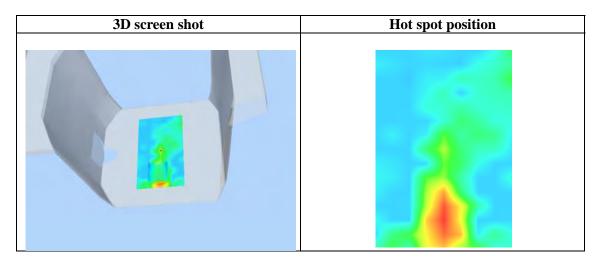
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Horizontal			
Band	WCDMA Band V			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



**Maximum location: X=-1.00, Y=-51.00** 

SAR 10g (W/Kg)	0.004501
SAR 1g (W/Kg)	0.009291

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0094	0.0049	0.0025	0.0014
	SAR, Z	Axis Scan	(X = −1,	Y = -51)	
C	). 009 –				
c	). 008 –	$\longrightarrow$			
(#/kg)	). 006 –	+			
	). 004 –	++			
	0.002				
	0.0 2.5		12.5 15.0 17. Z (mm)	.5 20.0 22.5 25	5.0



Page 86 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band V Mid-Vertical near antenna **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.46

Frequency: 835 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°ℂ):21, Liquid temperature (°ℂ):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

· Sensor-Surface: 4mm (Mechanical Surface Detection)

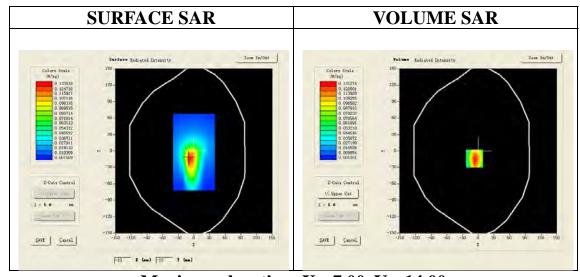
· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band  $\,V\,$  Mid-Vertical near antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/WCDMA Band  $\,V\,$  Mid-Vertical near antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

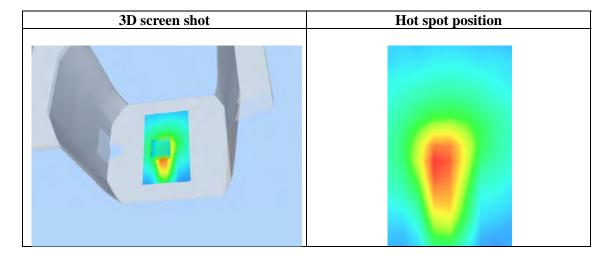
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Vertical			
Band	WCDMA Band V			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



Maximum location: X=-7.00, Y=-14.00

SAR 10g (W/Kg)	0.066904
SAR 1g (W/Kg)	0.134738

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1313	0.0631	0.0296	0.0146
	SAR, Z	Axis Scan	(X = -7,	Y = -14)	
	). 13 - ). 12 -				
	0. 10 -				
(#/kg)	1. 08 –	$+ \lambda +$			
SAR (%	). 06 –	++			_
	0. 04 -		+		-
	0.02				-
	0.01 -   0.0 2.5 5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5. 0
			Z (mm)		



Page 88 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band V Mid-Vertical away from antenna

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.46

Frequency: 835 MHz; Medium parameters used: f = 850 MHz;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon r = 53.28$ ;  $\rho = 1000 \text{kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°ℂ):21, Liquid temperature (°ℂ):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

· Sensor-Surface: 4mm (Mechanical Surface Detection)

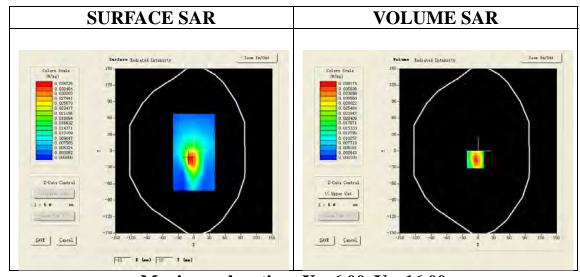
· Phantom: Flat Phantom; Type: Elliptical Phantom

Measurement SW: OpenSAR V4\_02\_01

Configuration/WCDMA Band  $\,V\,$  Mid-Vertical away from antenna /Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/WCDMA Band  $\,V\,$  Mid-Vertical away from antenna /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

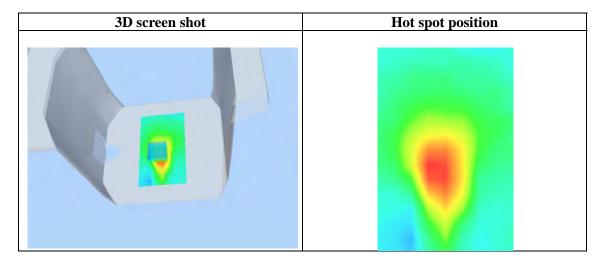
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Vertical			
Band	WCDMA Band V			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



**Maximum location: X=-6.00, Y=-16.00** 

SAR 10g (W/Kg)	0.018384
SAR 1g (W/Kg)	0.038910

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0382	0.0177	0.0074	0.0028
	SAR, Z	Axis Scan	(X = -6,	Y = -16)	
	). 038 – ). 035 –				
	. 030 –	$\longrightarrow$			_
(5)	ı. 025 – — — — — — — — — — — — — — — — — — —	+ + +			-
≥ 0	. 020 -	+			-
SAR o	. 015 -	++	$\overline{}$	-+	-
	. 010 -	+	$\rightarrow$		-
0	. 005 -	+		$\rightarrow$	-
0	. 001 -	50 75 10 0	12 5 15 0 17	.5 20.0 22.5 25	
	0.0 2.5	5.0 1.5 10.0	Z (mm)	.5 20.0 22.5 25	5.0



Page 90 of 161

Repeated SAR

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Low-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1852.4 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

## SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

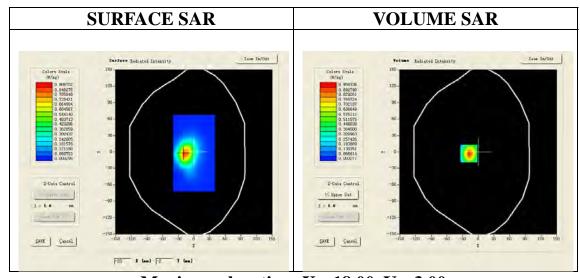
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA band  $\ II\$  Low-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band  $\ II\$  Low-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

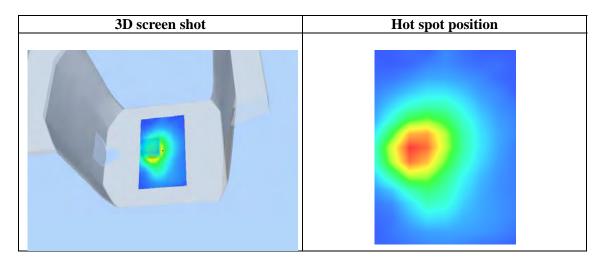
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	WCDMA band II			
Channels	Low			
Signal	TDMA (Crest factor: 1.0)			



**Maximum location: X=-18.00, Y=-3.00** 

SAR 10g (W/Kg)	0.439489
SAR 1g (W/Kg)	0.964114

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	0.9563	0.4275	0.1866	0.0886	
	SAR, Z	Axis Scan	(X = -18,	<b>∀</b> = −3)		
1	0-					
0	). 8-	$\longrightarrow$				
(W/kg)	). 6 –					
SAR (W/	), 4-					
			$\downarrow \mid \mid \mid$			
	). 0 -					
		.0 7.5 10.0	12.5 15.0 17.5	5 20.0 22.5 25	5. 0	
	Z (mm)					



Page 92 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II Mid-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51$  mho/m;  $\epsilon r = 52.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

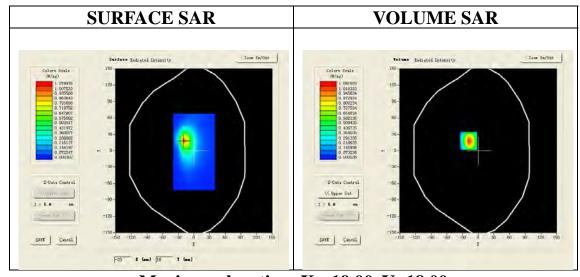
## **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4 02 01

Configuration/ WCDMA band II Mid-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band II Mid-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

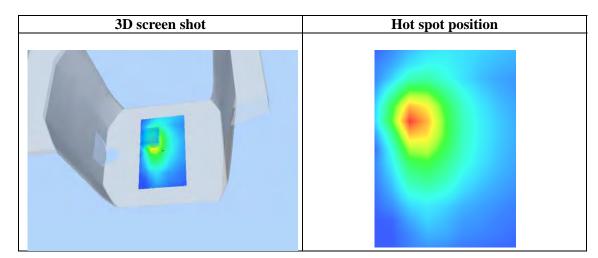
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	WCDMA band II			
Channels	Middle			
Signal	TDMA (Crest factor: 1.0)			



**Maximum location: X=-19.00, Y=18.00** 

SAR 10g (W/Kg)	0.464239
SAR 1g (W/Kg)	1.101944

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	1.0910	0.4341	0.1637	0.0692	
	SAR, Z	Axis Scan	(X = −19,	¥ = 18)		
	. 1 -					
20	). 8 -	$\longrightarrow$			-	
0	0.6-					
SAR	). 4 -					
	). O -					
	0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 Z (mm)					



Page 94 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

WCDMA Band II High-Body-Towards Grounds (RMC)

DUT: 7inch Tablet PC; Type: 3G7

Communication System: UMTS; Communication System Band: Band II UTRA/FDD; Duty Cycle:1:1; ConvF=4.84 Frequency: 1907.6 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon = 52.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

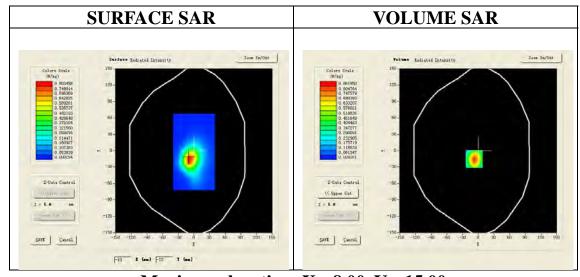
## **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

- · Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA band  $\ II$  High-Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm Configuration/ WCDMA band  $\ II$  High-Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

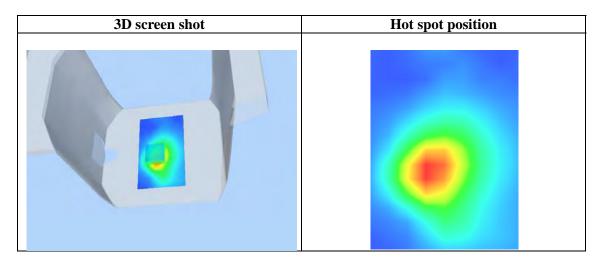
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	WCDMA band II		
Channels	High		
Signal	TDMA (Crest factor: 1.0)		



**Maximum location: X=-8.00, Y=-15.00** 

SAR 10g (W/Kg)	0.406814
SAR 1g (W/Kg)	0.869120

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.8619	0.4016	0.1827	0.0881
	SAR, Z	Axis Scan	$(X = -8^{2})$	Y = -15)	
C	0.9-				
C	0.7-	$\lambda + +$			
್ಯಾಂ	). 6 -	+			
SAR (W/kg)	).5-	+			-
# °	). 4 -	++			
	0.2-				
C	0.0-		10 - 15 0 15		
	0.0 2.5 5		12.5 15.0 17. Z (mm)	5 20.0 22.5 25	5.0



Page 96 of 161

## **WIFI MODE**

Test Laboratory: AGC Lab Date: Jul.26, 2013

802.11b Mid-Body-Worn- Touch **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°ℂ):21, Liquid temperature (°ℂ):21

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

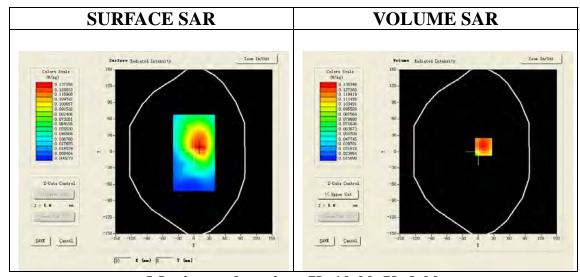
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11b Mid- Body- Touch /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11b Mid- Body- Touch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

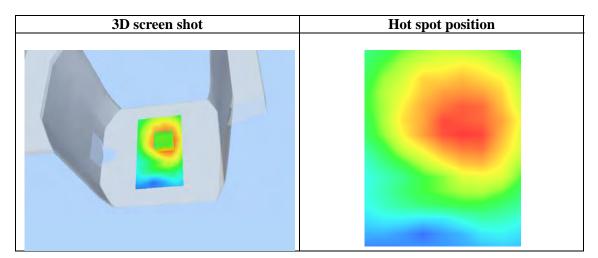
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=10.00, Y=9.00

SAR 10g (W/Kg)	0.085641	
SAR 1g (W/Kg)	0.130145	

Z (mm)	0.00	4.00	9.00	14.00	19.00		
SAR (W/Kg)	0.0000	0.1353	0.0908	0.0615	0.0424		
	SAR, Z Axis Scan (X = 10, Y = 9)						
C	). 14-						
C	). 12 -	$\overline{}$					
<sub>హ</sub> ం	). 10 -	+					
4/ 8 (	). 10 -						
¥.	). 06 –						
	). 04 - ). 03 -						
	0.0 2.5 5		12.5 15.0 17. Z (mm)	5 20.0 22.5 25	5. 0		



Test Laboratory: AGC Lab 802.11b Mid- Body- Front Date: Jul.26, 2013

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

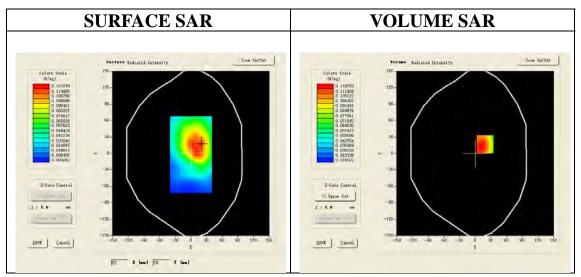
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11b Mid-Body- Front /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11b Mid-Body- Front Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

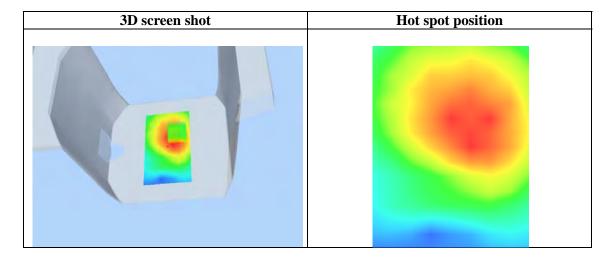
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Front			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=19.00, Y=17.00

SAR 10g (W/Kg)	0.078291	
SAR 1g (W/Kg)	0.114643	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1158	0.0810	0.0567	0.0400
	SAR, Z	Axis Scan	(X = 19,	Y = 17)	
C	). 12 -				
C	). 10 –				-
(W/kg)	). 08 -				
SAR o	). 06 -				-
	). 04 -				
	0.0 2.5 5		12.5 15.0 17. Z (mm)	5 20.0 22.5 25	5.0



Page 100 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

802.11g Mid-Body-Worn- Touch **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: 802.11g; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

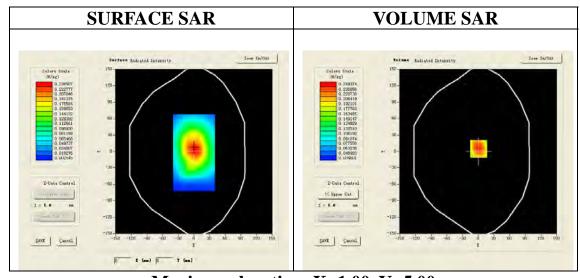
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11g Mid- Body- Touch /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11g Mid- Body- Touch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

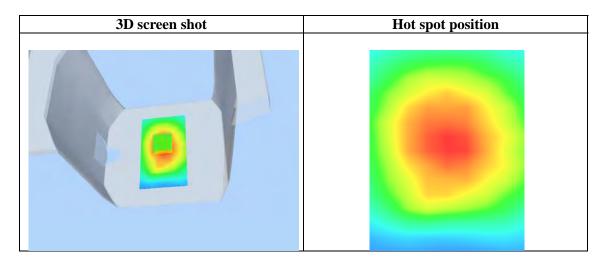
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=1.00, Y=5.00

SAR 10g (W/Kg)	0.163272	
SAR 1g (W/Kg)	0.257550	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2494	0.1524	0.0997	0.0731
	SAR, Z	Z Axis Scar	n (X = 1,	Y = 5)	
c	). 249 –			1 1	
c	). 225 –	$\rightarrow$			-
c	). 200 –	$+$ \- $+$			-
(%)	). 175 – ). 150 –	$+\lambda+$			-
€ (	). 150 -	++		-	-
SAR	). 125 -	++		-	-
c	). 100 –	+			-
	0.075				-
	0.058 -   0.0 2.5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5.0
	Z (mm)				



Page 102 of 161

Test Laboratory: AGC Lab

Date: Jul.26, 2013

802.11g Mid- Body- Front

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Wi-Fi; Communication System Band: 802.11g; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

#### **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

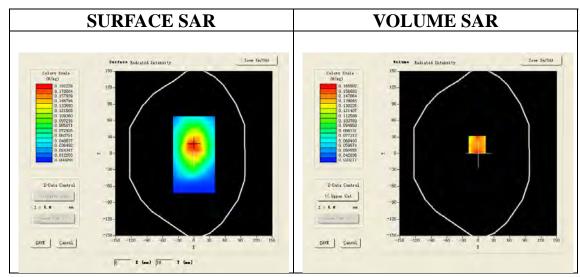
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11g Mid-Body- Front /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11g Mid-Body- Front Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Front			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=-2.00, Y=16.00

<b>SAR 10g (W/Kg)</b>	0.125896	
SAR 1g (W/Kg)	0.166259	

Z (mm)	0.00	4.00	9.00	14.00	19.00		
SAR (W/Kg)	0.0000	0.1446	0.1375	0.1131	0.0785		
	SAR, Z Axis Scan $(X = -2, Y = 16)$						
0	0.14 -	-					
0	). 12 –						
(W/kg)	). 10 –	+	+		-		
	). 08 –						
\$ 0	0.08-	<del>                                     </del>		$\overline{}$			
	). 06 –						
0	0.05-						
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0							
	Z (mm)						



Page 104 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

802.11n (20) Mid-Body-Worn- Touch **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: 802.11n (20); Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon r = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

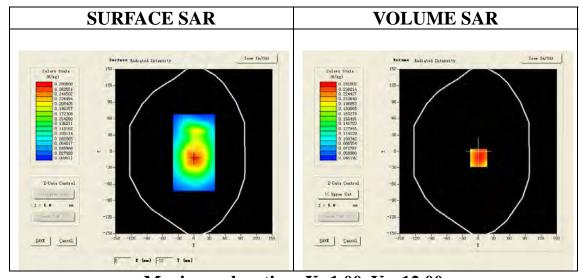
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11n (20) Mid- Body- Touch /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11n (20) Mid- Body- Touch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

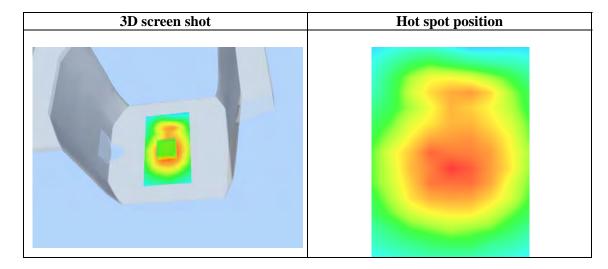
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=1.00, Y=-12.00

SAR 10g (W/Kg)	0.183982	
SAR 1g (W/Kg)	0.262512	

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	0.2520	0.1874	0.1363	0.0963	
	SAR, Z	Axis Scan	(X = 1, Y	<i>t</i> = −12)		
C	). 252 -	V I			-	
C	). 225 -	$\longrightarrow$				
	). 200 –	$+\lambda$			-	
(kg)	). 175 – ). 150 –	++			-	
≥ 0	). 150 -	+	+		-	
SAR	). 125 -				-	
C	). 100 –				-	
c	0.0 2.5	5.0 7.5 10.0	12.5 15.0 17.	5 20 0 22 5 25	5.0	
	Z (mm)					



Test Laboratory: AGC Lab

Date: Jul.26, 2013

802.11n(20) Mid- Body- Front

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Wi-Fi; Communication System Band: 802.11n(20); Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon r = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

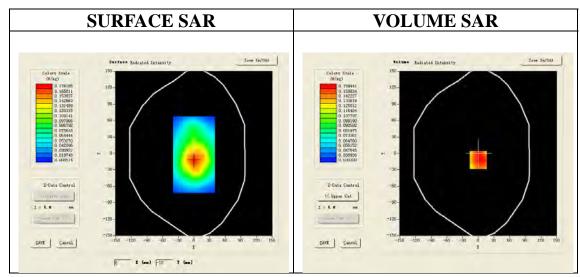
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11n(20) Mid-Body- Front /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11n(20) Mid-Body- Front Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Front			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=0.00, Y=-12.00

SAR 10g (W/Kg)	0.119070	
SAR 1g (W/Kg)	0.167418	

Z (mm)	0.00	4.00	9.00	14.00	19.00			
SAR (W/Kg)	0.0000	0.1591	0.1190	0.0873	0.0625			
	SAR, Z Axis Scan ( $X = 0$ , $Y = -12$ )							
C	). 16 -							
C	). 14-	$\longrightarrow$	$\perp$					
~ 0	). 12 -							
1/kg	0. 12 -	\						
8 0	). 08 –	+	+		-			
	). 06 –							
	). 04 –							
	0.0 2.5 5	5.0 7.5 10.0	12.5 15.0 17.	5 20.0 22.5 25	5. 0			
Z (mm)								



Page 108 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

802.11n (40) Mid-Body-Worn- Touch **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: 802.11n (40); Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon r = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

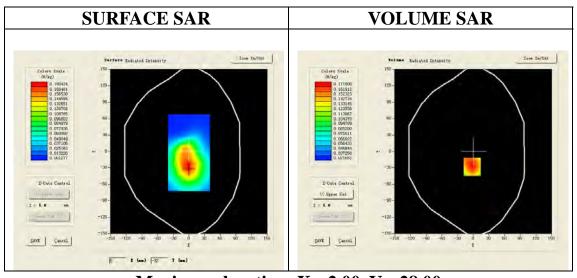
#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- · Phantom: Flat Phantom; Type: Elliptical Phantom
- · Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11n (40) Mid- Body- Touch /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11n (40) Mid- Body- Touch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

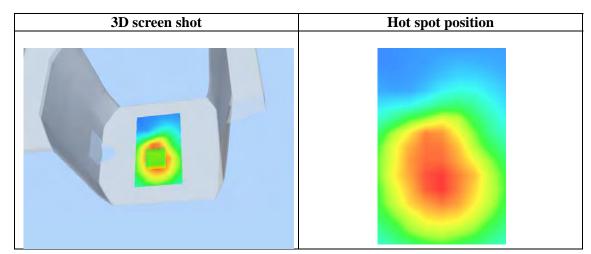
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Touch			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=-2.00, Y=-28.00

SAR 10g (W/Kg)	0.124097	
SAR 1g (W/Kg)	0.175275	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1716	0.1247	0.0942	0.0668
	SAR, Z	Axis Scan	(X = -2,	Y = -28)	
	0. 17 -				
	). 14-	+			-
#/kg)	0.12-	++			
A.B. C	). 10-				-
,, 0	). 08 –				
	). 06 -				
,	0.04 -     0.0 2.5 !			5 20.0 22.5 25	5.0
			Z (mm)		



Page 110 of 161

Test Laboratory: AGC Lab

Date: Jul.26, 2013

802.11n(40) Mid- Body- Front

DUT: 7inch Tablet PC; Type: 3G7

Communication System: Wi-Fi; Communication System Band: 802.11n(40); Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93$  mho/m;  $\epsilon r = 53.62$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

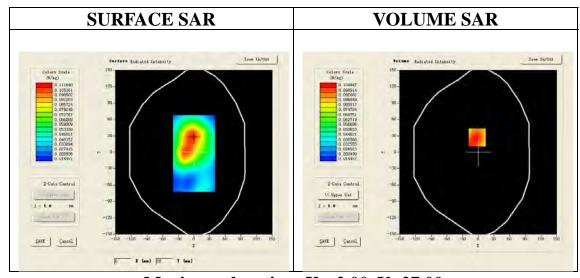
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/802.11n(40) Mid-Body- Front /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/802.11n(40) Mid-Body- Front Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

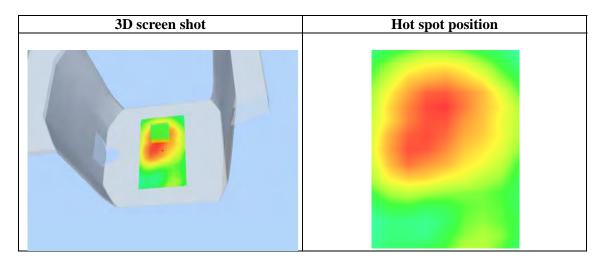
Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Front			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=-2.00, Y=27.00

SAR 10g (W/Kg)	0.076382	
SAR 1g (W/Kg)	0.106270	

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1032	0.0625	0.0480	0.0236
	SAR, Z	Axis Scan	(X = −2,	Y = 27)	
0	). 10 –				
0	1. 09 -				
	08-				
(%)	). 07 –	+	$\perp$		
≥ 0	0.06 -	++			
SAR	. 05 -	<del>                                     </del>	$\longrightarrow$		-
o	0.04	+++			
0	. 03 –		+		-
0	). 02 -				
	0.0 2.5 5			5 20.0 22.5 25	5.0
			Z (mm)		



Page 112 of 161

# **HOTSPOT MODE**

Test Laboratory: AGC Lab Date: Jul.26, 2013

Hotspot Mid-Body-Worn- Touch **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: Hotspot; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

#### SATIMO Configuration:

Probe: EP165; Calibrated: 01/31/2013

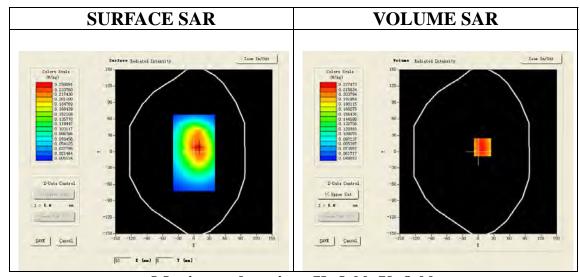
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/Hotspot Mid- Body- Touch /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/Hotspot Mid- Body- Touch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

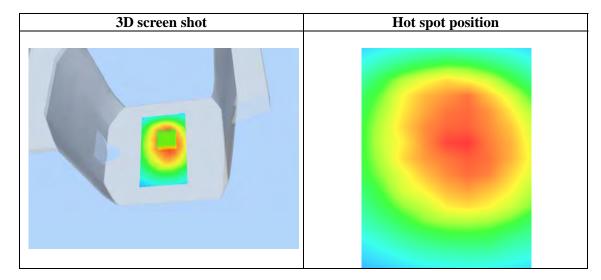
Area Scan	surf_sam_plan.txt		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast		
Phantom	Validation plane		
Device Position	Body Touch		
Band	2450MHz		
Channels	Middle		
Signal	TDMA (Crest factor: 8.0)		



Maximum location: X=8.00, Y=8.00

SAR 10g (W/Kg)	0.164353
SAR 1g (W/Kg)	0.235870

Z (mm)	0.00	4.00	9.00	14.00	19.00	
SAR (W/Kg)	0.0000	0.2275	0.1591	0.1138	0.0840	
	SAR, Z	Axis Sca	n (X = 8,	A = 8)		
0	0. 23 -					
C	). 20 -	$\longrightarrow$				
0	). 18-	+	$\perp$			
(%)	0. 16 -		$\perp$		-	
≥ 0	. 14 –	++	+		-	
SAR o	). 12-				-	
0	). 10 -	+ + +			-	
	0.08-				-	
0	0.06-    0.0 2.5 5		12 5 15 0 17	5 20 0 22 5 25	5.0	
	0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 Z (mm)					



Page 114 of 161

Test Laboratory: AGC Lab Date: Jul.26, 2013

Hotspot Mid- Body- Earphone **DUT: 7inch Tablet PC; Type: 3G7** 

Communication System: Wi-Fi; Communication System Band: Hotspot; Duty Cycle: 1:1; Conv.F=4.32; Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.93 \text{ mho/m}$ ;  $\epsilon = 53.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

#### **SATIMO Configuration:**

Probe: EP165; Calibrated: 01/31/2013

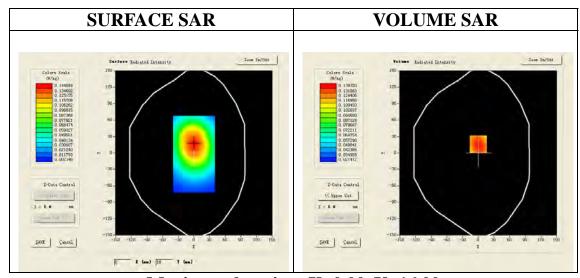
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: Flat Phantom; Type: Elliptical Phantom

· Measurement SW: OpenSAR V4\_02\_01

Configuration/Hotspot Mid-Body- Earphone /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm Configuration/Hotspot Mid-Body- Earphone /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast			
Phantom	Validation plane			
Device Position	Body Earphone			
Band	2450MHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=0.00, Y=16.00

<b>SAR 10g (W/Kg)</b>	0.104907
SAR 1g (W/Kg)	0.146286

Z (mm)	0.00	4.00	9.00	14.00	19.00		
SAR (W/Kg)	0.0000	0.1393	0.0995	0.0713	0.0514		
SAR, Z Axis Scan (X = 0, Y = 16)							
	0.14						
	0. 12 -						
	0. 08 -						
	). 06 –						
	0. 04 –						
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 Z (mm)							

